

June 25, 2009

Ladies and Gentlemen:

As Texas' Comptroller, I am committed to helping our state cultivate a thriving economic climate. As one part of this effort, my office conducts an ongoing study of factors affecting the state economy.

One result of this work is our *Texas in Focus* series of reports, which provides unique data and analysis of the state's 12 economic regions. We have designed this series to provide state and local decision-makers with tools for guiding and assisting regional economic growth.

Today, I am pleased to present our latest regional report, *Texas in Focus: Upper Rio Grande*, which examines trends and issues affecting the six counties comprising this region and highlights its challenges and successes.

The economic outlook for the Upper Rio Grande region is promising. Its employment growth should continue, and increasing educational opportunities will help prepare the region's work force for tomorrow's workplace. The military, park tourism and the apparel and footwear industry will continue to be important anchors for its economy.

El Paso's new Paul L. Foster School of Medicine and the construction of the Children's Hospital at Thomason General Hospital will assist the region in meeting its health care needs. Interstate Highway 10, the Foreign Trade Zone at El Paso International Airport and the proposed La Entrada al Pacifico highway should help cement the region's position in international trade.

The people, natural resources and infrastructure of the Upper Rio Grande region should ensure long term economic growth in the region. I hope you will find this report helpful.

Sincerely,

Susan Combs





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Introduction

With its enormous size, vast array of natural resources and large population, Texas plays a significant role in the nation's economy. Our diverse economy helped buffer Texas from the national recession during most of 2008, making it one of the last states to lose jobs.

Our state's economy remains open for business. We are not, however, immune from global economic forces, and could continue to see negative impacts from national and international economic problems until the economy recovers.

It is important to all Texans that the state continues to grow and to discover new

opportunities. And the role of state government is to create and foster an environment in which this can happen.

The Texas Comptroller analyzes factors affecting the state's economy and uses this information to prepare its biennial forecast of state revenue. To perform this task, our economists keep their fingers on the pulse of the state, detecting changes as they occur and identifying trends that will affect our common future.

In January 2008, the Comptroller began a series of reports called *Texas in Focus*. The first report, *A Statewide View of Opportunities*, examined issues affecting the state and its economy as a whole. Other reports in the series examine each of the state's 12 economic regions. Previous volumes looked at the High Plains, South Texas, Upper East Texas



Guadalupe Mountains – El Capitan and Guadalupe Peak

PHOTO: Texas Department of Transportation



and Central Texas regions, providing detailed data and analysis specific to those regions.

This sixth report in the series, *Texas in Focus: The Upper Rio Grande Region*, examines issues affecting an economic region that includes the Rio Grande Council of Governments. The Upper Rio Grande region consists of six counties in the westernmost portion of the state and includes the cities of El Paso, Alpine, Presidio, Van Horn, Marfa and Fort Davis (**Exhibit 1**).

This report provides information on the forces driving change in the Upper Rio Grande region, and examines factors that may affect the development of its economy. State leaders, county and city officials, chambers of commerce, economic development corporations and the general public can use this report to stay on top of important issues as they work to keep their local economies thriving. Areas explored in this report include:

Economic Development

The Upper Rio Grande region's employment growth should match the state's by 2013, with its non-metro counties surpassing statewide growth for this period.

Strongest job growth is expected in the professional and business services sector, with 79 percent more jobs in 2013 than in 2003. In all, the region's job count is expected to rise by 24 percent over this period, despite the current national downturn.

The military is the region's largest employer, accounting for 27 percent of the region's total employment, 3.5 times the national average. Other important industries in the region include the manufacture of household vacuum cleaners and men's footwear, tourism and agricultural production.

Demographics

Nearly 97 percent of the Upper Rio Grande region's residents live in or near El Paso. Between 2003 and 2013, El Paso's population should increase by 12.5 percent, compared to a 17 percent growth rate for the state. Outside of El Paso County, the region's population should remain largely unchanged. The region's population is relatively young, with more than 42 percent under the age of 25 in 2008, compared to 38 percent in Texas and 34 percent in the U.S.

Infrastructure

The Upper Rio Grande has more public parkland than any other region in the state, boasting Texas' two national parks, including Big Bend National Park at 801,163 acres or 1,252 square miles, and several state parks.

The region also serves as an important international trade corridor between Mexico and the United States via Interstate Highway 10 and a Foreign Trade Zone operated by the El Paso International Airport. And El Paso Water Utilities' recently opened Kay Bailey Hutchison Desalination Plant is one of the world's largest inland desalination plant, providing the region with an important source for potable water.

Health Care

Like many other areas in Texas, the Upper Rio Grande faces a shortage of trained health care professionals. This shortage, however, should be reduced by Texas' first new medical school since 1977, the Paul L. Foster School of Medicine, scheduled to open its doors in El Paso on July 9, 2009.

The new medical school should increase the region's supply of medical professionals.



In addition, construction of the Children's Hospital at Thomason General Hospital, El Paso's first children's hospital, began in February 2009 and is anticipated to open in early 2012. And while the region has historically been underserved, five of El Paso's 14 largest employers are health-related organizations.

Education

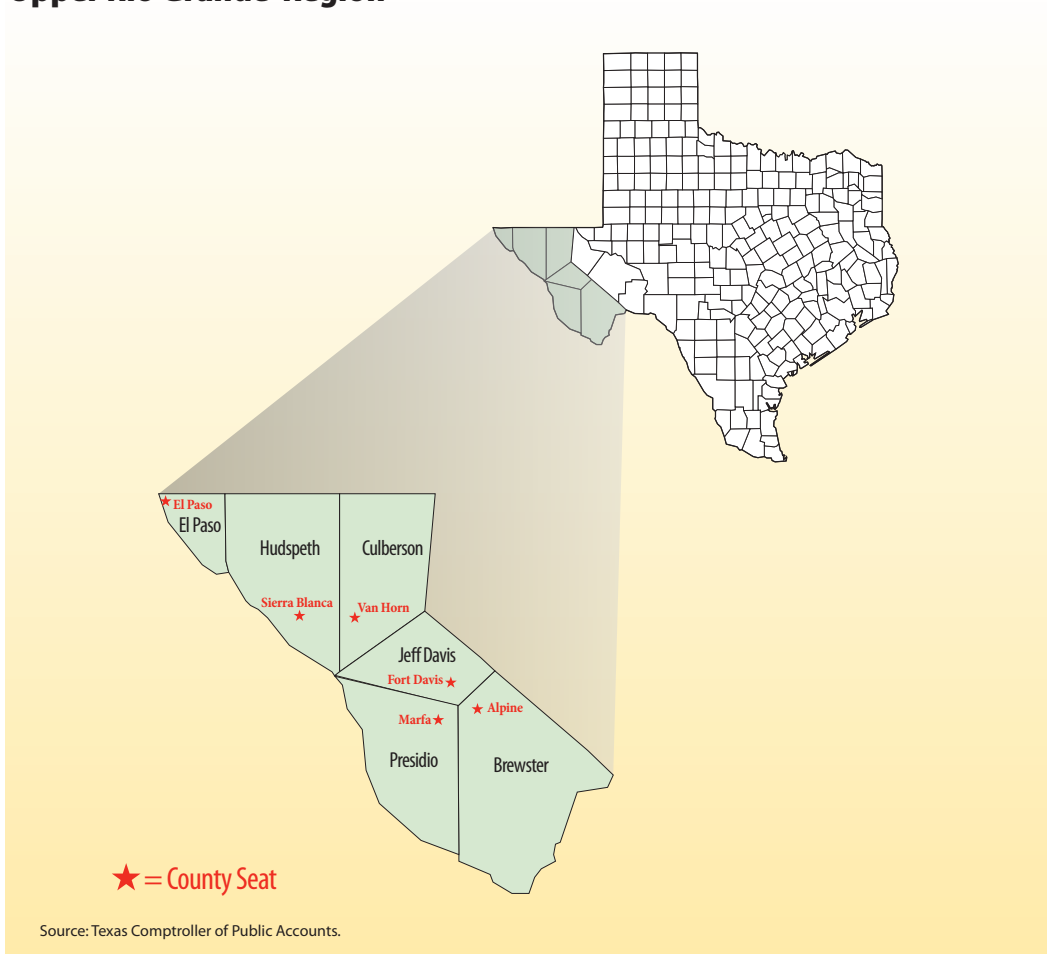
The region's school districts vary dramatically in size, from the El Paso Independent School District with almost 62,000 students to San Vicente Independent School District

in Brewster County, with just 26 students. Although three-quarters of the region's students are classified as economically disadvantaged, 88 percent of its campuses are rated Academically Acceptable or above.

The four-year graduation rate at the region's major university, the University of Texas at El Paso, doubled between 1999 and 2007. From 2005 to 2007, *Hispanic Business* magazine ranked the university's College of Engineering first in the nation for Hispanic students, while the National Science Foundation has designated the college a "Model Institution for Excellence."

Exhibit 1

Upper Rio Grande Region







Economic Development

Desert landscapes characterize the Upper Rio Grande region. Located on the northern end of the Chihuahuan desert, the region's open spaces fill vast areas between the Davis, Franklin, Guadalupe and Chisos mountains. Despite its dry climate and sparse population, the region has developed a unique industrial mix that relies on international trade and its strategic location between the U.S. coasts.

The military has played a large role in the area's economy since the early years of Texas statehood. Military outposts built in the El Paso

area during the Mexican-American War spurred the city's development and led to the establishment of Fort Bliss in 1848.¹ Today, Fort Bliss covers 1.1 million acres and hosts an active force of more than 14,000 with a supporting community population exceeding 120,000.²

Manufacturing is a traditional pillar of the regional economy. Jobs in the production of goods such as vacuum cleaners and men's footwear, as well as in copper refining, continue to outpace national counterparts. Service industries that support manufacturing, such as wholesaling and transportation, have evolved to become important industries as well.

Another traditional pillar of the region's economy is the agriculture industry. Sixty-one percent of the land and 71 percent of the water in the region are used for either farming or ranching.

Fort Bliss covers 1.1 million acres and hosts an active force of more than 14,000 with a supporting community population exceeding 120,000.



PHOTO: Virginia Reza, Fort Bliss Monitor

Groundbreaking ceremony for the First Light Federal Credit Union and United Services Organizations facility at Fort Bliss



Fort Bliss

The U.S. Army base now called Fort Bliss began as “The Post Opposite El Paso,” established in 1848. In 1890, the post moved to its present-day site on the La Noria Mesa overlooking El Paso.³

In 2005, Congress enacted Base Realignment and Closure decisions intended to transform and reshape the U.S. Defense Department’s infrastructure. This realignment process eventually will bring more than 20,000 new troops to Fort Bliss, creating a tremendous positive impact on the El Paso economy. Some of these additional troops have already arrived, with the remainder scheduled to arrive by 2013. About 53,000 family members will accompany them.

The diverse array of missions at Fort Bliss includes heavy and light infantry brigades, combat aviation, missile defense, field artillery and multiple support functions. The expansion of Fort Bliss represents the largest net gain of any military installation in the U.S., almost tripling in size from about 14,000 to more than 37,000 soldiers. This growth will also create a projected 24,000 civilian jobs in the El Paso area. By 2013, the installation’s gross annual payroll will rise to nearly \$1.78 billion, from \$478 million in 2005, and the Army will invest nearly \$5 billion in new facilities and infrastructure.

By 2013, Fort Bliss will be transformed into one of the most technically advanced army installations in the world, employing state-of-the-art technology from different military branches. Fort Bliss is part of a two-state regional military complex of more than 7,100 square miles (4.1 million acres) consisting of the Texas installation and New Mexico’s White Sands Missile Range and Holloman Air Force Base. Together, these facilities comprise the largest contiguous land area owned by the U.S. Department of Defense.

Most significantly, Fort Bliss has been selected as the site for integrated field testing of the Army’s newest technologies. The Future Combat System program, the Army’s primary modernization program, has transformed Fort Bliss into the premiere installation for development and testing of future technologies.⁴

Fort Bliss will now house the entire First Armored Division with its division headquarters, as well as a Combat Aviation Brigade, a Fires Brigade, a Sustainment Brigade and other smaller units. The Army Evaluation Task Force, which tests and evaluates new technologies before they are introduced to the entire Army, will be based there as well.⁵

As with the rest of the nation, the region’s future growth will depend less on its traditional goods-producing industries and more on service jobs, such as professional and business services.

Exhibit 2 shows employment projections for the Upper Rio Grande region through 2013, including El Paso, the region’s sole metropolitan statistical area (MSA), and the five predominately rural counties. These expected changes are presented in the form of growth indices using 2003 as the base year, with an index equal to 100.

The region has experienced job growth similar to that of the state as a whole. The Comptroller expects regional employment growth to

accelerate from 2009 to 2011 with additional troops stationed at Ft. Bliss. Employment in the El Paso MSA should see similar growth, rising by 1.7 percent in 2009 and 2.9 percent in 2010. After a slight decline in 2008, job growth in the non-metro counties should resume in 2009, with growth accelerating through 2013.

Economic Trends

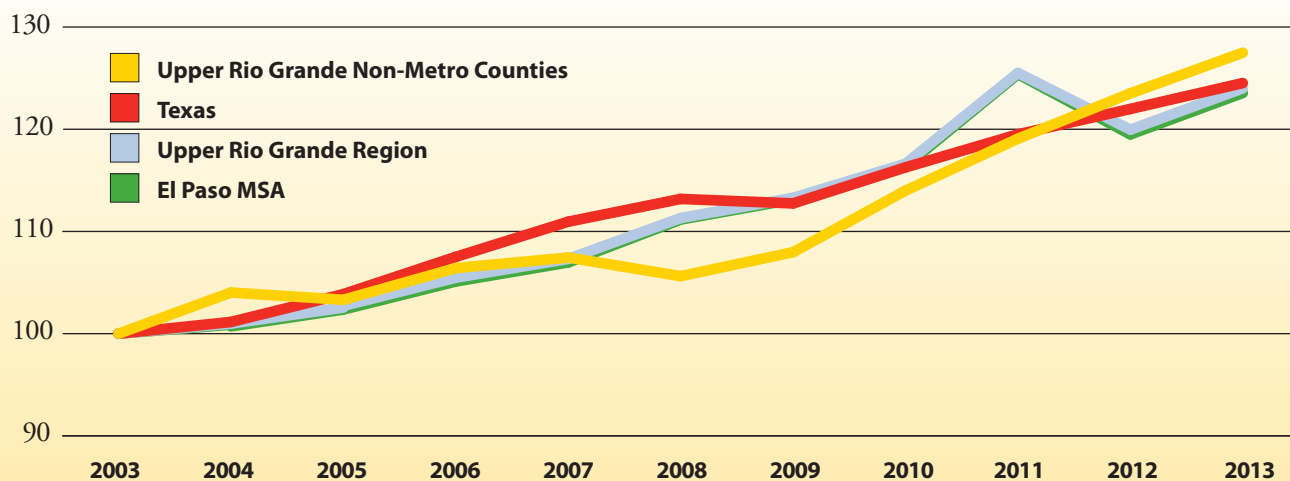
In 2008, employers in the Upper Rio Grande region provided a total of 305,657 jobs. **Exhibit 3** provides a detailed picture of projected employment growth in the region, displaying growth indices for various

(text continued on Page 8)



Exhibit 2

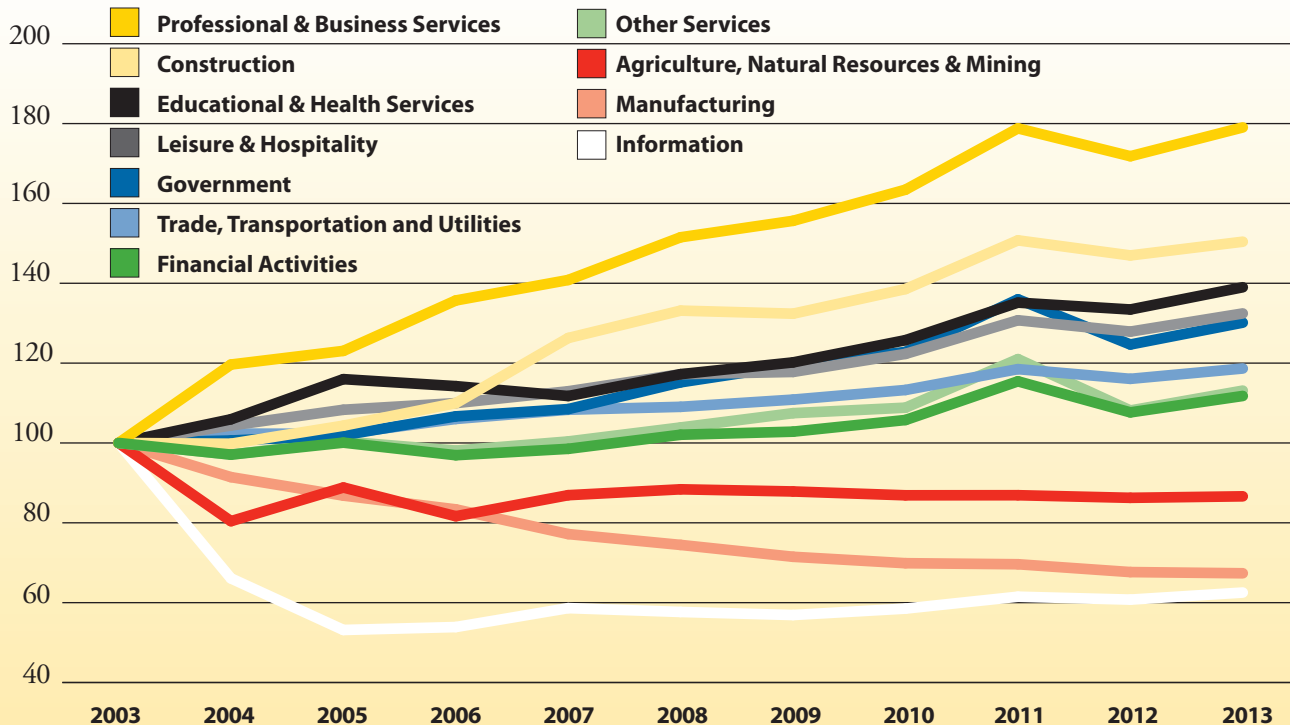
Upper Rio Grande Region Employment Indices, 2003-2013



Source: Economic Modeling Specialists Inc.

Exhibit 3

Industry Employment Projection Indices, Upper Rio Grande Region, 2003-2013



Source: Economic Modeling Specialists Inc.



industries in the region, using 2003 as the base year. Employment for these industries is presented at the 11-industry “supersector” level of the North American Industry Classification System (NAICS).⁶

A supersector, as identified by a two-digit NAICS code, represents an aggregation of industries producing related goods and services. At this level, industries are classified into either goods-producing or service-producing supersectors.

The goods-producing group comprises three supersectors — agriculture, natural resources and mining, construction and manufacturing. The service-producing group comprises seven supersectors including education and health, finance, government, information, leisure and hospitality, other services and trade, transportation and utilities.

Eight of the 11 supersectors in **Exhibit 3** should show positive growth between 2003 and 2013, with exceptional growth in professional and business services. In all, Upper Rio Grande employment should rise by 24 percent over this period, despite the current national downturn.

Of the eight supersectors projected to add jobs by the period’s end, two will show steady expansion. Government employment is expected to rise each year except 2012, with nearly 95,000 jobs projected by 2013. This will represent the largest share of the region’s employment, at more than 27 percent.

The professional and business services sector is also expected to add jobs each year except in 2012, led by strong growth in telemarketing bureaus. These businesses added 3,200 jobs to the region in 2004 alone, and should finish the 2003-2013 period with at least 7,400 jobs. Collection agency growth should make a

significant contribution as well, after jumping from 123 jobs in 2004 to 1,127 jobs in 2005. Both industries are concentrated in the El Paso area, attracted by its strategic location for the e-commerce and telecommunications industries (offering easy access to an extensive network of fiber-optic lines), in addition to a young and skilled bilingual work force.⁷ As a whole, the professional and business service supersector should increase employment by 79 percent from 2003 to 2013.

Despite various industry downturns during the period, other supersectors show strong projected job growth through 2013. Expected growth in the construction supersector — by nearly 50 percent — trails only that for professional and business services, despite a slowdown in 2004 and the current economic downturn. Employment in commercial building construction and non-residential drywall installation should account for 33.5 percent of all construction jobs added through 2013.

Educational and health services employment should rise by 39 percent through 2013, driven by positive growth in home health care services. Home health care will contribute more jobs to the supersector than any other industry, representing 40 percent of projected regional job creation by the period’s end. The next strongest health-related industry in terms of expected growth is physicians’ offices, accounting for 13.5 percent of the projected job growth through 2013. Educational industries should see more modest growth.

Other regional industry sectors anticipating positive job growth rates over the period include leisure and hospitality (32 percent), trade, transportation and utilities (19 percent), other services (13 percent) and financial activities (12 percent).⁸

Government employment is expected to rise each year except 2012, with nearly 95,000 jobs projected by 2013. This will represent the largest share of the region’s economy, at more than 27 percent.



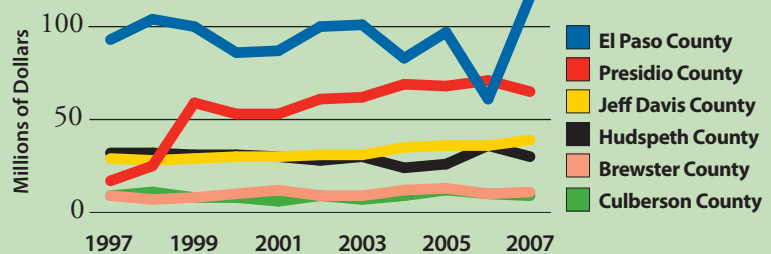
Upper Rio Grande Agriculture

Agriculture plays an important role in the Upper Rio Grande economy. Crops dominate regional production, accounting for 83 percent of agricultural value in 2007, versus 15 percent for livestock, and 2 percent for other agricultural products.⁹ In that year, the region's 1,225 farms produced goods worth \$271 million, including \$224 million from crops and \$40 million from livestock.¹⁰ The economic activities related to agriculture in the Upper Rio Grande directly or indirectly contributed just over \$529 million to the Texas economy, an economic impact of nearly twice the sector's size.¹¹

Land devoted to agriculture covers 61 percent of the region's total acreage. The average farm in the region spans more than 6,900 acres, with county averages ranging from 25,000 acres per farm in Culberson County to 286 acres in El Paso County.¹² Despite its smaller farms, El Paso County leads the Upper Rio Grande in crop and total production, generating 51 percent of the region's crop value and 43 percent of its total agricultural value.¹³

Recent improvements in pecan farming practices have boosted crop production in El Paso County, which is also supported by strong cotton and vegetable yields. Presidio and Jeff Davis counties both continue to benefit from large hydroponic tomato greenhouses established in the late 1990s.¹⁴ Vegetable production in Presidio County rose dramatically from \$7.1 million in 1997 to \$53 million in 1999, a level sustained through today. Similarly, Jeff Davis County had no significant vegetable crop until 1997, when the industry emerged with \$21 million in production. In addition, Jeff Davis County leads the region in livestock production, contributing 34 percent of the region's livestock value, at \$13.4 million.¹⁵

Total Agricultural Cash Value



Source: Texas A&M Agrilife Extension Service.



Hydroponic Tomato Presidio Greenhouse facility in Marfa, Texas

PHOTO: Village Farms



Economic Structure

Job growth depends upon a region's underlying economic structure. That structure includes multiple factors including natural resources, labor force characteristics and the composition and *concentration* of the region's industries.

This latter characteristic, also called *clustering*, is particularly important since industry clusters give firms within them access to more suppliers and a pool of skilled laborers with valuable knowledge and information.¹⁶ The benefits that result from high industry concentrations give a region its competitive edge.¹⁷

One tool that can be used to identify industry concentration is the "location quotient." The location quotient identifies industry concentrations by comparing the share of a region's economy attributable to a specific industry to the share that same industry accounts for in the nation's economy.

In essence, the share an industry accounts for in the national economy is seen as the "norm"

for that industry, so comparing that norm with its share of a regional economy indicates whether that region tends to have "a lot" or "a little" of a particular industry. Typically, a region will contain "a lot" of industries for which it has some natural or developed competitive advantage, based for instance on a local abundance of a particular resource, a favorable climate, an advantageous natural feature (such as proximity to a port), a highly educated labor force or some other factor.

A location quotient greater than one indicates a high regional employment concentration in an industry compared to the same industry at the national level. This means that the region is "specialized" in that particular industry. A location quotient of less than one indicates that the region's concentration in the industry is less than the national industry level. In essence, the region is *less* specialized in that given industry.

Exhibit 4 lists industries in the Upper Rio Grande region with location quotients

(text continued on Page 13)

Exhibit 4

Upper Rio Grande Region's Largest Industry Location Quotients, 2008

Construction

NAICS Code	Description	2008 Jobs	2008 Location Quotient
238132	Nonresidential framing contractors	152	3.16
238312	Nonresidential drywall contractors	938	2.37
236210	Industrial building construction	835	2.15
238192	Other nonresidential exterior contractors	161	2.11

Manufacturing

NAICS Code	Description	2008 Jobs	2008 Location Quotient
335212	Household vacuum cleaner manufacturing	849	88.24
316213	Men's nonathletic footwear manufacturing	778	53.81
331411	Primary smelting and refining of copper	226	50.78
334415	Electronic resistor manufacturing	459	42.66
315211	Men's cut and sew apparel contractors	508	15.09
315224	Men's pants, except work pants, manufacturing	87	13.99



Exhibit 4 (cont.)

Upper Rio Grande Region's Largest Industry Location Quotients, 2008

NAICS Code	Description	2008 Jobs	2008 Location Quotient
313221	Narrow fabric mills	243	13.74
332114	Custom roll forming	180	13.24
315239	Other women's outerwear manufacturing	475	12.56
327999	Miscellaneous nonmetallic mineral products	362	12.23
327124	Clay refractory manufacturing	134	10.10
313320	Fabric coating mills	158	8.35
311911	Roasted nuts and peanut butter manufacturing	218	8.21
311422	Specialty canning	195	7.99
331422	Copper wire, except mechanical, drawing	316	7.97
335211	Electric housewares and household fan manufacturing	181	7.38
311830	Tortilla manufacturing	255	6.46
311514	Dry, condensed, and evaporated dairy products	204	6.37
314911	Textile bag mills	86	5.05
332323	Ornamental and architectural metal work manufacturing	414	4.56
331319	Other aluminum rolling and drawing	70	4.51
339994	Broom, brush, and mop manufacturing	96	4.29
333516	Rolling mill machinery and equipment manufacturing	36	4.02
316999	All other leather good manufacturing	47	3.94
337124	Metal household furniture manufacturing	68	3.84
336322	Other motor vehicle electric equipment manufacturing	475	3.73
327122	Ceramic wall and floor tile manufacturing	64	3.72
326121	Unlaminated plastics profile shape manufacturing	195	3.67
333314	Optical instrument and lens manufacturing	184	3.64
333112	Lawn and garden equipment manufacturing	149	3.48
327320	Ready-mix concrete manufacturing	762	3.12
315999	All other accessory and apparel manufacturing	46	2.92
331111	Iron and steel mills	584	2.78
322211	Corrugated and solid fiber box manufacturing	614	2.62
336415	Space vehicle propulsion units and parts manufacturing	83	2.57
332912	Fluid power valve and hose fitting manufacturing	188	2.37
322212	Folding paperboard box manufacturing	164	2.36
327331	Concrete block and brick manufacturing	116	2.31

Trade, Transportation and Utilities

NAICS Code	Description	2008 Jobs	2008 Location Quotient
423620	Electric appliance merchant wholesalers	523	7.68
488999	All other support activities for transport	136	6.92
485210	Interurban and rural bus transportation	203	5.26
221111	Hydroelectric power generation	378	4.53
454111	Electronic shopping	736	4.14
423930	Recyclable material merchant wholesalers	973	3.84
424320	Men's and boys' clothing merchant wholesalers	242	3.57
484121	General freight trucking, long-distance TL	3,691	3.16



Exhibit 4 (cont.)

Upper Rio Grande Region's Largest Industry Location Quotients, 2008

NAICS Code	Description	2008 Jobs	2008 Location Quotient
484110	General freight trucking, local	1,474	2.97
488510	Freight transportation arrangement	1,204	2.96
445230	Fruit and vegetable markets	231	2.75
485113	Bus and other motor vehicle transit systems	178	2.72
448210	Shoe stores	936	2.22
454210	Vending machine operators	221	2.12
452910	Warehouse clubs and supercenters	5,067	2.06
448320	Luggage and leather goods stores	68	2.00

Financial Activities

NAICS Code	Description	2008 Jobs	2008 Location Quotient
523130	Commodity contracts dealing	99	3.89
532120	Truck, trailer, and RV rental and leasing	487	3.72
522130	Credit unions	1,404	2.71
522291	Consumer lending	638	2.48

Professional and Business Services

NAICS Code	Description	2008 Jobs	2008 Location Quotient
561422	Telemarketing bureaus	5,965	7.50
561440	Collection agencies	1,756	5.30
541910	Marketing research and public opinion polling	662	2.69
541840	Media representatives	186	2.66

Educational and Health Services

NAICS Code	Description	2008 Jobs	2008 Location Quotient
621610	Home health care services	7,697	3.66
611410	Business and secretarial schools	99	3.39
611519	Other technical and trade schools	459	3.11
624310	Vocational rehabilitation services	1,974	2.84
621491	HMO medical centers	420	2.60
621991	Blood and organ banks	353	2.39

Leisure and Hospitality

NAICS Code	Description	2008 Jobs	2008 Location Quotient
722212	Cafeterias	875	3.02

Other Services

NAICS Code	Description	2008 Jobs	2008 Location Quotient
811192	Car washes	705	2.19

Government

NAICS Code	Description	2008 Jobs	2008 Location Quotient
912000	Federal government, military	17,285	3.53
911000	Federal government, civilian, except postal service	10,169	2.24

Source: Economic Modeling Specialists Inc.



exceeding two based on 2008 employment, meaning the region's share of employment in an industry is at least twice as large as the nation's share. These industries are grouped according to their respective NAICS super-sectors and ranked from the highest to lowest location quotient within each supersector.¹⁸

The manufacturing of household vacuum cleaners has the region's highest location quotient, with a measure of 88.24. In other words, the industry's level of employment in the Upper Rio Grande region is more than 88 times larger than the nation's share.

Most Competitive Industries

While location quotients provide important information on regional industry concentrations, they offer only a snapshot — a static measure at a particular point in time. To assess the competitive resilience of a regional

industry, a more dynamic measure is needed.

One such measure is “shift-share analysis.”

In this analysis, the change in an industry's regional presence is divided into three components: the portion attributable to the overall growth or decline in the nation's economy (the national growth effect); that attributable to the difference between the national trend for an industry and the national trend for all industries (the industry mix effect); and that attributable to the region's competitiveness as a site for the industry (the regional competitiveness effect).

Exhibit 5 lists the Upper Rio Grande region's most competitive industries based on shift-share analysis. The industries are ranked based on their employment change in the regional competitiveness component (and thus the industry's comparative advantage in the region) between 2002 and 2008.

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Indian Cliffs Ranch

In 1968, El Paso County gave its Hueco Tanks property to Texas for development as a state park, forcing renters of the land to relocate. Dieter Gerzymisch was running a horse rental operation at Hueco Tanks and decided to stay in the area, purchasing land along the San Antonio Stagecoach trail, about 35 miles southeast of El Paso near IH-10. The property, called Indian Cliffs Ranch, contains the ruins of an old stagecoach stop on the trail where passengers and mail traveled to western destinations.

In 1973, Gerzymisch opened a restaurant on the ranch called the Cattleman's Steakhouse. Additions to the original building have added 180 seats, as well as banquet facilities for up to 4,000 guests. The steaks are famous and have been voted best in El Paso by *El Paso Times* readers. They also serve traditional trail food such as ranch-style beans, corn on the cob and green chile strips. Gerzymisch continues to personally oversee all aspects of the business from selecting the meat to food preparation to customer service.

Indian Cliffs Ranch also offers numerous activities for children. Every Sunday, the ranch runs hay rides throughout the day. In addition, the ranch has a maze and playground for all ages, as well as a children's petting zoo.¹⁹

Indian Cliffs Ranch has hosted a number of movie productions, including *Resurrection*, *The Border*, *Lone Wolf McQuade*, *Death of an Angel*, *Extreme Prejudice*, *Courage Under Fire*, *On the Border*, *The Jessica Lynch Story*, *Glory Road* and *The Day After Tomorrow*.²⁰

The ranch successfully combines a unique Old West experience with high-quality dining to attract visitors from the El Paso area and beyond.



Exhibit 5

Most Competitive Industries, Upper Rio Grande Region, 2003-2008

Rank	Description	Super Sector	National Growth Effect	Industry Mix Effect	Regional Competitive Effect	Total Jobs Added Since 2003
1	Telephone call centers	Professional and Business Services	74	48	4,446	4,568
2	Federal government, military	Government	621	-875	3,896	3,642
3	Local government	Government	2,164	309	1,941	4,414
4	Full-service restaurants	Leisure and Hospitality	415	888	1,523	2,825
5	Federal government, civilian, except postal service	Government	407	349	1,431	2,187
6	Residential building construction	Construction	48	-11	1,039	1,076
7	Computer systems design and related services	Professional and Business Services	26	100	965	1,091
8	Wired telecommunications carriers	Information	69	-460	794	403
9	Services for the elderly and disabled	Educational and Health Services	6	73	684	763
10	Collection agencies	Professional and Business Services	53	18	640	711
11	Department stores	Trade, Transportation and Utilities	168	-501	638	304
12	Marketing research and public opinion polling	Professional and Business Services	2	-2	631	630
13	Drywall and insulation contractors	Construction	28	-25	530	534
14	Office administrative services	Professional and Business Services	25	164	516	704
15	Home centers	Trade, Transportation and Utilities	28	78	496	602
16	General freight trucking, local	Trade, Transportation and Utilities	51	-68	490	473
17	Metal valve manufacturing	Manufacturing	2	-6	475	471
18	Engineering services	Professional and Business Services	37	115	425	578
19	General freight trucking, long-distance	Trade, Transportation and Utilities	188	16	417	620
20	New car dealers	Trade, Transportation and Utilities	148	-343	408	212
21	Iron and steel mills and ferroalloy manufacturing	Manufacturing	10	-24	399	384
22	Other outpatient care centers	Educational and Health Services	22	124	387	533
23	Highway, street, and bridge construction	Construction	29	-84	355	300
24	Wireless telecommunications carriers	Information	17	-21	351	347
25	Truck, trailer, and RV rental and leasing	Financial Activities	7	-9	344	342



Exhibit 5 (cont.)

Most Competitive Industries, Upper Rio Grande Region, 2003-2008

Rank	Description	Super Sector	National Growth Effect	Industry Mix Effect	Regional Competitive Effect	Total Jobs Added Since 2003
26	General warehousing and storage	Trade, Transportation and Utilities	43	223	341	607
27	All other nonmetallic mineral products manufacturing	Manufacturing	1	3	339	343
28	Shoe stores	Trade, Transportation and Utilities	30	1	309	341
29	Offices of physicians	Educational and Health Services	180	351	296	826
30	Community care facilities for the elderly	Educational and Health Services	19	84	289	393
31	Plumbing and HVAC contractors	Construction	89	233	283	605
32	Drinking places, alcoholic beverages	Leisure and Hospitality	50	-139	279	191
33	Other nondepository credit intermediation	Financial Activities	37	-39	260	258
34	Offices of real estate agents and brokers	Financial Activities	16	25	253	294
35	Hardware stores	Trade, Transportation and Utilities	12	-34	244	222
36	Freight transportation arrangement	Trade, Transportation and Utilities	44	53	242	339
37	Land subdivision	Construction	6	-11	240	234
38	Commercial building construction	Construction	77	21	238	337
39	Electric appliance merchant wholesalers	Trade, Transportation and Utilities	14	-11	238	242
40	Plastics pipe, fittings, and profile shapes	Manufacturing	3	-7	234	230
41	State government	Government	448	-96	230	582
42	Family clothing stores	Trade, Transportation and Utilities	61	201	229	491
43	Accounting and bookkeeping services	Professional and Business Services	67	113	229	410
44	Credit unions	Financial Activities	49	159	226	435
45	Medical equipment merchant wholesalers	Trade, Transportation and Utilities	10	29	223	262
46	Radio broadcasting	Information	9	-14	223	218
47	Hardware manufacturing	Manufacturing	0	-1	209	208
48	Pharmacies and drug stores	Trade, Transportation and Utilities	52	34	208	295
49	Real estate property managers	Financial Activities	22	61	208	291
50	Framing contractors	Construction	5	-23	207	190

Source: Economic Modeling Specialists Inc.



The highest-ranked industry is telephone call centers, which generated 4,568 jobs between 2002 and 2008. Local factors (from the competitiveness effect) contributed 4,446 jobs, or 97 percent of this increase. The remaining growth was due to a growing national economy and industry growth outpacing overall national growth.

Another, similar example is the computer systems design industry, for which local conditions contributed 88 percent of job growth. Industries such as these that have favorable local conditions (such as an extensive infrastructure or favorable government policies) combined with a growing national industry have the highest potential for future growth.

Good Jobs for the Future

Shift-share analysis identifies the region's most competitive industries — those that possess the best chances for increased employment opportunities. But what types of occupations can Upper Rio Grande residents expect to find within these industries? **Exhibit 6** presents a list of “good jobs” for the region's future, grouping them based on their educational requirements.

For the purpose of this analysis, a “good job” is one for which the weighted average of median annual earnings, as reported by the Texas Workforce Commission, exceeds the state's 2007 per capita personal income level of

(text continued on Page 25)

Exhibit 6

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Doctoral and First Professional Degrees

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Physicians and surgeons	1,222	1,370	258	148	110	\$183,093
Dentists, general	74	79	12	5	7	171,619
Podiatrists	14	15	3	1	2	103,124
Pharmacists	479	593	159	114	45	102,609
Lawyers	768	846	153	78	75	93,091
Optometrists	39	45	9	6	3	87,591
Veterinarians	65	78	20	13	7	84,810
Chiropractors	42	44	4	2	2	71,565
Computer and information scientists, research	20	24	7	4	3	70,225
Audiologists	15	17	3	2	1	62,789
Medical scientists, except epidemiologists	122	148	46	26	20	60,832
Postsecondary teachers	4,459	5,358	1,280	899	381	54,626
Clinical, counseling, and school psychologists	65	74	14	9	5	54,529
Total	7,384	8,691	1,968	1,307	661	
Weighted Average of Median Annual Earnings						\$84,961



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013**Master’s Degrees**

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Physical therapists	324	400	96	76	20	\$80,608
Occupational therapists	240	289	67	49	18	80,237
Geoscientists, except hydrologists and geographers	29	34	9	5	4	78,895
Operations research analysts	65	72	14	7	7	77,703
Urban and regional planners	16	18	4	2	2	68,557
Statisticians	12	13	3	1	2	66,023
Museum Technicians and Conservators	17	18	5	1	4	65,920
Instructional coordinators	258	307	67	49	18	65,858
Speech-language pathologists	360	411	86	51	35	62,521
Social scientists and related workers, all other	25	27	6	2	4	60,811
Counselors, all other	293	328	64	35	29	58,607
Educational, vocational, and school counselors	850	958	193	108	85	54,569
Librarians	426	466	98	40	58	48,760
Environmental scientists and specialists, including health	92	107	27	15	12	43,363
Curators	20	23	7	3	4	42,770
Total	3,027	3,471	746	444	302	
Weighted Average of Median Annual Earnings						\$61,419

Degree Plus Work Experience

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Chief executives	224	238	44	14	30	\$165,851
Natural sciences managers	20	22	4	2	2	122,405
Engineering managers	130	140	23	10	13	107,141
Computer and information systems managers	282	320	61	38	23	95,234
Actuaries	15	17	5	2	3	89,116
Compensation and benefits managers	53	59	11	6	5	80,443
Administrative services managers	538	599	132	61	71	79,557
Advertising and promotions managers	11	11	1	0	1	79,516
Training and development managers	14	16	3	2	1	79,069
Marketing managers	192	212	41	20	21	75,787



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Education administrators, elementary and secondary school	719	801	183	82	101	74,945
Sales managers	360	391	70	31	39	73,707
Human resources managers, all other	14	15	2	1	1	72,778
Purchasing managers	52	53	8	1	7	67,527
Medical and health services managers	386	439	90	53	37	67,012
Financial managers	573	624	93	51	42	65,982
General and operations managers	3,553	3,773	647	220	427	64,622
Public relations managers	16	18	4	2	2	59,257
Arbitrators, mediators, and conciliators	21	24	5	3	2	56,274
Management analysts	307	355	75	48	27	53,478
Administrative law judges, adjudicators, and hearing officers	38	41	7	3	4	52,200
Producers and directors	118	127	26	9	17	51,376
Art directors	13	14	3	1	2	50,833
Vocational education teachers, secondary school	463	489	105	26	79	47,484
Broadcast news analysts	39	43	10	4	6	40,335
Education administrators, postsecondary	150	176	47	26	21	37,792
Education administrators, all other	64	73	18	9	9	37,471
Farm, ranch, and other agricultural managers	209	199	-2	-10	8	37,410
Total	8,574	9,289	1,716	715	1,001	
Weighted Average of Median Annual Earnings						\$68,841

Bachelor's Degree

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Personal financial advisors	90	104	18	14	4	\$113,485
Petroleum engineers	90	92	14	2	12	98,241
Orthotists and prosthetists	17	19	3	2	1	97,912
Aerospace engineers	37	39	6	2	4	91,485
Materials scientists	13	16	5	3	2	91,382
Computer software engineers, systems software	359	437	105	78	27	82,750
Physician assistants	50	59	12	9	3	77,827
Surveyors	47	54	14	7	7	76,529
Sales engineers	23	24	4	1	3	75,890



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Chemical engineers	13	14	3	1	2	70,988
Electronics engineers, except computer	157	172	34	15	19	70,225
Health diagnosing and treating practitioners, all other	68	73	11	5	6	68,948
Engineers, all other	110	118	15	8	7	68,866
Health and safety engineers, except mining safety engineers and inspectors	20	22	4	2	2	68,722
Computer software engineers, applications	74	96	28	22	6	67,650
Animal scientists	20	23	6	3	3	63,881
Chemists	27	29	6	2	4	63,098
Computer systems analysts	1,200	1434	397	234	163	62,809
Architects, except landscape and naval	152	172	35	20	15	60,255
Securities, commodities, and financial services sales agents	208	224	42	16	26	58,792
Electrical engineers	254	272	48	18	30	58,545
Industrial engineers	154	171	36	17	19	58,216
Budget analysts	144	157	30	13	17	57,144
Network systems and data communications analysts	589	785	259	196	63	57,062
Civil engineers	352	400	95	48	47	56,815
Social workers, all other	111	124	25	13	12	56,053
Conservation scientists	13	15	4	2	2	55,929
Mechanical engineers	119	123	17	4	13	55,764
Financial analysts	82	95	15	13	2	54,940
Biological scientists, all other	74	79	13	5	8	54,796
Credit analysts	91	91	17	0	17	53,601
Financial examiners	12	13	2	1	1	52,865
Business operation specialists, all other	1,821	2,106	385	285	100	52,406
Materials engineers	63	66	10	3	7	51,974
Logisticians	200	226	41	26	15	51,747
Construction managers	505	586	120	81	39	51,047
Occupational health and safety specialists	88	96	16	8	8	50,964
Database administrators	166	201	44	35	9	50,841
Commercial and industrial designers	18	17	1	-1	2	49,275
Human resources, training, and labor relations specialists, all other	169	196	46	27	19	49,172
Network and computer systems administrators	398	468	116	70	46	48,946



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Medical and clinical laboratory technologists	323	348	50	25	25	48,925
Therapists, all other	15	17	3	2	1	48,266
Accountants and auditors	1,503	1,652	279	149	130	48,122
Insurance underwriters	75	86	21	11	10	47,710
Writers and authors	45	50	9	5	4	47,689
Loan officers	421	445	46	24	22	47,112
Tax examiners, collectors, and revenue agents	84	93	20	9	11	47,030
Adult literacy, remedial education, and GED teachers and instructors	142	162	28	20	8	46,762
Compensation, benefits, and job analysis specialists	244	277	60	33	27	46,535
Financial specialists, all other	85	92	18	7	11	46,268
Set and exhibit designers	21	23	5	2	3	46,206
Secondary school teachers, except special and vocational education	3,693	4,074	933	381	552	46,152
Dietitians and nutritionists	84	92	19	8	11	45,753
Elementary school teachers, except special education	5,961	6,814	1511	853	658	45,345
Training and development specialists	214	252	62	38	24	45,238
Middle school teachers, except special and vocational education	2,907	3,289	702	382	320	44,834
Technical writers	78	89	23	11	12	44,414
Law clerks	44	47	7	3	4	44,187
Kindergarten teachers, except special education	632	730	151	98	53	44,071
Special education teachers, secondary school	231	258	53	27	26	43,434
Medical and public health social workers	243	290	73	47	26	42,869
Special education teachers, preschool, kindergarten, and elementary school	483	565	137	82	55	42,658
Multi-media artists and animators	66	83	25	17	8	42,580
Environmental engineers	100	115	30	15	15	42,271
Legal support workers, all other	34	37	6	3	3	42,137
Meeting and convention planners	33	36	6	3	3	41,921
Special education teachers, middle school	188	217	50	29	21	41,573
Social and community service managers	214	237	44	23	21	40,809
Computer programmers	618	648	108	30	78	40,397
Farm and home management advisors	10	11	2	1	1	40,252



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Insurance sales agents	497	582	140	85	55	38,254
Film and video editors	18	16	0	-2	2	38,131
Market research analysts	330	373	54	43	11	38,089
Probation officers and correctional treatment specialists	320	366	65	46	19	37,760
Atmospheric and space scientists	13	14	3	1	2	37,513
Total	28,167	31,988	6,845	3,821	3,024	
Weighted Average of Median Annual Earnings						\$49,033

Associate Degree

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Radiation therapists	34	38	7	4	3	\$88,209
Nuclear medicine technologists	43	46	6	3	3	71,152
Computer specialists, all other	143	161	37	18	19	62,006
Social science research assistants	10	13	5	3	2	56,094
Occupational therapist assistants	54	67	17	13	4	55,002
Diagnostic medical sonographers	66	72	10	6	4	54,858
Registered nurses	4,800	5,388	987	588	399	54,178
Funeral directors	23	26	6	3	3	52,983
Dental hygienists	151	176	40	25	15	52,860
Forensic science technicians	15	18	6	3	3	51,294
Fashion designers	13	12	1	-1	2	50,964
Mechanical engineering technicians	43	45	6	2	4	50,429
Physical therapist assistants	188	240	64	52	12	46,453
Electrical and electronic engineering technicians	229	241	34	12	22	45,402
Chemical technicians	56	61	14	5	9	45,176
Fish and game wardens	16	17	3	1	2	44,414
Respiratory therapists	197	216	34	19	15	44,063
Radiologic technologists and technicians	330	355	47	25	22	43,878
Geological and petroleum technicians	36	44	15	8	7	43,734
Respiratory therapy technicians	95	92	11	-3	14	43,610
Biological technicians	38	43	12	5	7	43,425
Industrial engineering technicians	82	83	9	1	8	42,045
Cardiovascular technologists and technicians	100	111	18	11	7	41,921
Engineering technicians, except drafters, all other	88	94	15	6	9	39,284



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Interior designers	46	49	9	3	6	38,604
Paralegals and legal assistants	376	427	77	51	26	38,357
Computer support specialists	1,057	1,225	336	168	168	38,028
Total	8,329	9,360	1,826	1,031	795	
Weighted Average of Median Annual Earnings						\$49,864

Postsecondary Vocational Award

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Commercial pilots	27	34	11	7	4	\$69,952
Court reporters	130	146	27	16	11	57,474
Electrical and electronics repairers, powerhouse, substation, and relay	48	41	1	-7	8	50,017
Aircraft mechanics and service technicians	212	219	18	7	11	46,762
Avionics technicians	59	60	4	1	3	45,444
Library technicians	114	129	43	15	28	43,033
Appraisers and assessors of real estate	57	66	15	9	6	41,715
Licensed practical and licensed vocational nurses	1,383	1,534	338	151	187	38,749
Total	2,030	2,229	457	199	258	
Weighted Average of Median Annual Earnings						\$41,985

Long-term on-the-job training

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Air traffic controllers	33	38	10	5	5	\$82,750
Elevator installers and repairers	100	96	8	-4	12	60,543
Compliance officers, except agriculture, construction, health and safety, and transportation	1,721	1,854	236	133	103	55,332
Petroleum pump system operators, refinery operators, and gaugers	177	170	29	-7	36	55,332
Chemical plant and system operators	64	71	20	7	13	50,573
Coaches and scouts	360	405	91	45	46	49,852
Transit and railroad police	24	26	5	2	3	49,399
Telecommunications equipment installers and repairers, except line installers	890	964	181	74	107	48,657



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Power distributors and dispatchers	14	13	2	-1	3	47,112
Gas plant operators	72	57	-3	-15	12	46,288
Electrical power-line installers and repairers	52	51	7	-1	8	45,732
Claims adjusters, examiners, and investigators	466	516	111	50	61	44,723
Boilermakers	27	31	9	4	5	44,475
Police and sheriff's patrol officers	1,501	1,721	423	220	203	42,889
Military Occupations	17,285	39,708	24,276	22,423	1853	42,271
Power plant operators	62	56	4	-6	10	39,531
Fire fighters	1,117	1,277	366	160	206	39,387
Umpires, referees, and other sports officials	10	11	2	1	1	39,099
Tool and die makers	97	87	1	-10	11	37,554
Interpreters and translators	65	76	19	11	8	37,265
Total	22,669	23,115	3,152	446	2,706	
Weighted Average of Median Annual Earnings						\$43,838

Moderate-term on-the-job training

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Railroad conductors and yardmasters	33	38	12	5	7	\$71,709
Audio-visual collections specialists	23	23	3	0	3	70,637
Locomotive engineers and operators	68	76	20	8	12	58,319
Signal and track switch repairers	16	16	1	0	1	48,472
Sales representatives, services, all other	606	740	208	134	74	48,286
Precision instrument and equipment repairers, all other	34	36	7	2	5	42,889
Chemical equipment operators and tenders	54	56	9	2	7	42,889
Railroad brake, signal, and switch operators	40	42	12	2	10	41,488
Media and communication equipment workers, all other	14	15	3	1	2	40,953
Wellhead pumpers	17	11	-2	-6	4	40,211
Title examiners, abstractors, and searchers	124	133	20	9	11	39,243
Sales representatives, wholesale and manufacturing, except technical and scientific products	2,377	2,387	253	10	243	39,243



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Truck drivers, heavy and tractor-trailer	5,875	6,249	877	374	503	38,151
Cargo and freight agents	321	356	80	35	45	37,822
Total	9,602	10,178	1,503	576	927	
Weighted Average of Median Annual Earnings						\$39,482

Short-term on-the-job training

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Postal service clerks	118	125	21	7	14	\$44,661
Postal service mail carriers	524	553	108	29	79	44,558
Postal service mail sorters, processors, and processing machine operators	234	235	24	1	23	42,312
Total	876	913	153	37	116	
Weighted Average of Median Annual Earnings						\$43,972

Work experience in a related field

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Managers, all other	411	452	83	41	42	\$81,123
Industrial production managers	210	200	31	-10	41	77,744
First-line supervisors/managers of police and detectives	240	273	71	33	38	74,181
Transportation, storage, and distribution managers	207	223	47	16	31	65,529
Postmasters and mail superintendents	23	24	4	1	3	65,055
Real estate brokers	10	11	2	1	1	63,572
Captains, mates, and pilots of water vessels	19	20	4	1	3	59,719
Lodging managers	63	72	16	9	7	58,365
First-line supervisors/managers, protective service workers, all other	73	80	13	7	6	51,912
First-line supervisors/managers of non-retail sales workers	522	568	83	46	37	50,882
Detectives and criminal investigators	1,299	1,524	372	225	147	49,811
Fire inspectors and investigators	20	23	5	3	2	49,152
Food service managers	403	443	87	40	47	48,451
First-line supervisors/managers of mechanics, installers, and repairers	952	993	151	41	110	45,299



Exhibit 6 (cont.)

“Good Jobs,” Upper Rio Grande Region, 2008-2013

Occupation	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	Median 2008 Annual Earnings
Self-enrichment education teachers	83	97	19	14	5	44,146
First-line supervisors/managers of fire fighting and prevention workers	43	50	14	7	7	43,548
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	361	390	65	29	36	42,436
Purchasing agents, except wholesale, retail, and farm products	411	421	54	10	44	41,488
Cost estimators	270	304	61	34	27	40,520
Transportation inspectors	79	89	24	10	14	40,129
Wholesale and retail buyers, except farm products	185	188	23	3	20	40,046
First-line supervisors/managers of correctional officers	175	203	52	28	24	38,707
First-line supervisors/managers of construction trades and extraction workers	1,052	1,164	184	112	72	37,574
Total	7,111	7,812	1,465	701	764	
Weighted Average of Median Annual Earnings						\$49,557

Sources: Economic Modeling Specialists Inc., Texas Workforce Commission and Texas Comptroller of Public Accounts.

\$37,187.²¹ In the Upper Rio Grande region, 227 occupations pay more than this amount.

Occupations requiring doctoral and professional degrees command the highest annual earnings, with weighted median earnings of \$84,961 for the region. Occupations requiring both a college degree and work experience provide the second-highest earnings, with weighted median earnings of \$68,841. Occupations requiring a master's degree ranked third, with a weighted median of \$61,419.

Occupations in the region requiring postsecondary vocational training provide weighted median earnings of \$41,985 annually. Occupations requiring an associate degree (without work experience) yield slightly higher earnings than those requiring a bachelor's degree (again,

without work experience). Associate degree occupations offer weighted median earnings of \$49,864, while bachelor's degree occupations offer weighted median earnings of \$49,033.

It should be noted that many occupations that meet the “good jobs” definition do not require a college degree. A number of occupations requiring related work experience, on-the-job-training or postsecondary vocational training also provide good wages. At a weighted median of \$49,557, jobs requiring work experience but no postsecondary education provide higher earnings than jobs requiring a bachelor's degree without work experience, at \$49,033.

Exhibit 7 lists 25 occupations expected to have the highest number of job openings in the Upper Rio Grande region between 2008



Exhibit 7

Occupations with the Most Projected Job Openings, Upper Rio Grande Region, 2008-2013

Rank	Description	2008 Jobs	2013 Jobs	Total Job Openings	Growth	Replacement	2008 Median Annual Earnings
1	Military Occupations	17,285	39,708	24,276	22,423	1,853	\$42,271
2	Retail salespersons	11,067	12,757	3,487	1,690	1,797	17,016
3	Cashiers, except gaming	8,396	9,157	3,014	761	2,253	14,358
4	Waiters and waitresses	5,413	6,285	2,346	872	1,474	13,843
5	Combined food preparation and serving workers, including fast food	10,009	11,184	2,123	1,175	948	13,926
6	Personal and home care aides	4,701	6,014	1,721	1,313	408	13,411
7	Customer service representatives	4,238	5,304	1,682	1,066	616	23,031
8	Elementary school teachers, except special education	5,961	6,814	1,511	853	658	59,987
9	Postsecondary teachers	4,459	5,358	1,280	899	381	70,328
10	Telemarketers	3,177	3,671	1,244	494	750	16,521
11	Office clerks, general	5,964	6,608	1,189	644	545	18,066
12	Registered nurses	4,800	5,388	987	588	399	54,178
13	Laborers and freight, stock, and material movers, hand	5,484	5,607	959	123	836	16,789
14	Secondary school teachers, except special and vocational education	3,693	4,074	933	381	552	61,223
15	Janitors and cleaners, except maids and housekeeping cleaners	4,689	5,152	911	463	448	16,583
16	Truck drivers, heavy and tractor-trailer	5,875	6,249	877	374	503	38,151
17	Secretaries, except legal, medical, and executive	6,323	6,641	817	318	499	22,578
18	Stock clerks and order fillers	4,189	4,324	808	135	673	16,789
19	Middle school teachers, except special and vocational education	2,907	3,289	702	382	320	59,390
20	Bookkeeping, accounting, and auditing clerks	3,785	4,156	666	371	295	26,698
21	Security guards	3,379	3,686	652	307	345	17,016
22	First-line supervisors/managers of retail sales workers	2,774	3,119	652	345	307	30,385
23	General and operations managers	3,553	3,773	647	220	427	64,622
24	First-line supervisors/managers of office and administrative support workers	2,986	3,304	628	318	310	36,421
25	Correctional officers and jailers	2,058	2,432	614	374	240	31,662

Source: Economic Modeling Specialists Inc.



and 2013. Retail salespersons top the list, with 3,487 new job openings through 2013 and median annual earnings of \$17,016.²²

Eleven of the 25 occupations require only short-term, on-the-job training. These provide median annual earnings ranging between \$13,411 and \$18,066. Three of the occupations require a bachelor's degree, including elementary, middle and secondary school teachers.

Comptroller Assistance

One of the many functions of the Texas Comptroller of Public Accounts is to analyze

demographics, labor force statistics and other economic factors needed to generate local economic growth, and to provide this information to local governments and other groups. Through its Texas EDGE (Economic Data for Growth and Expansion) program, the agency can identify occupational and industry trends and their effects on local and regional economies.

Since August 2008, the Comptroller has responded to 549 Texas EDGE requests from city and county government officials, economic development corporations, private

Shopping and Retail in Upper Rio Grande Region

Businesses and commercial establishments in the Upper Rio Grande region generated more than \$8.7 billion in gross sales in 2007. About 41 percent, or almost \$3.6 billion of that amount, was subject to state and local sales taxes. State sales taxes levied in the region totaled \$297 million in 2007.

In 2007, the Upper Rio Grande region had 36,839 retail employees earning total wages of \$798.7 million. Brewster County had the region's largest percentage increase in retail employment from 2006 to 2007, with an increase of 9 percent. Total retail wages in the region rose by \$54.9 million from 2006 to 2007.

The Upper Rio Grande region offers a broad selection of retail shopping, some taking advantage of regional manufacturing. El Paso calls itself the "Boot Capital of the World," with more than 12 manufacturers and retailers in the surrounding area. Reminiscent of Mexican open-air markets, El Paso's *mercados* offer a range of unique handcrafted goods including crafts, clothing, antiques and furniture.

Marfa has a number of art galleries with items reflecting the cultural heritage of the American West. More modern pieces can be found at galleries such as Ballroom Marfa, the Galleri Urbane and the Inde/Jacobs.²³

Retail Gross Sales, Sales Tax and Wages, Upper Rio Grande Region, 2007

County	Gross Sales, 2007	Amount Subject to Sales Tax, 2007	Sales Tax, 2007	Employees, 2007	Total Wages, 2007
Brewster	\$78,058,243	\$39,710,737	\$3,276,136	872	\$14,856,209
Culberson	103,717,657	13,691,776	1,095,342	285	4,394,775
El Paso	8,469,375,027	3,512,345,590	289,768,511	35,309	774,216,989
Hudspeth	8,990,083	1,872,841	117,053	72	855,964
Jeff Davis	7,948,590	4,577,836	377,671	51	1,048,767
Presidio	45,329,477	23,405,145	1,872,412	250	3,362,007
Total	\$8,713,419,077	\$3,595,603,925	\$296,507,125	36,839	\$798,734,711

Sources: Texas Comptroller of Public Accounts and Texas Workforce Commission.



Apparel and Footwear Manufacturing Industry Profile

Strategically located along the Mexican border, El Paso maintains a strong footwear manufacturing sector and was once a leader in apparel manufacturing. Businesses take advantage of abundant materials imported from Mexico to produce clothing and shoes in Texas that are then shipped throughout the world. In 2007, the 40 regional footwear manufacturers employed 1,811 workers and paid \$56.5 million in wages. Similarly, the region's 39 apparel manufacturers employed 1,372 workers and paid \$43.3 million in wages.²⁴

Among El Paso's many boot manufacturers, the Lucchese plant serves as the company's only factory, producing its entire catalog of cowboy boots. After acquiring Dan Post Boots in 1986, Lucchese relocated from San Antonio to consolidate manufacturing in El Paso. With more than 330 employees, the plant makes approximately 3,500 pairs of boots per week. Materials and supplies come from around the world, but mostly from within the U.S., and final products are distributed from an on-site warehouse.²⁵

Apparel manufacturing in the Upper Rio Grande region has been hurt by

competition from globalization, as lower production costs overseas and in Mexico have forced producers abroad. Even so, many resilient businesses have remained in the region, shifting their operations from manufacturing to distribution and logistics services within the transportation sector.

The region's transportation services provided 9,865 jobs in 2007, mostly in truck transportation. Highways and international road ports help give the regional transportation industry more than twice the job share of the national norm, with a location quotient of 2.02. Rail transportation also plays an important regional role, providing 1,055 jobs in 2007.²⁶

Other regional businesses have shifted from producing clothes for retail stores to filling government contracts. El Paso's Excel Garments, for instance, has been in business for 33 years and began as a garment washing service. The company moved into garment manufacturing, making denim for retail clothing lines, until it entered military uniform production four years ago. Today, Excel employs 385 workers and draws annual revenues of nearly \$12 million.²⁷

2007 Industry Figures, Upper Rio Grande Region

	Jobs	Wages	Establishments	Average Annual Wage
Apparel Manufacturing	1,372	\$43,258,820	39	\$31,530
Footwear Manufacturing	1,811	\$56,503,410	40	\$31,200
Truck Transportation	7,052	\$258,900,076	411	\$36,713
Rail Transportation	1,055	\$87,388,815	—	\$82,833
Transportation Support Services	1,758	\$62,976,834	177	\$35,823

Sources: Texas Comptroller of Public Accounts and Economic Modeling Specialists Inc.



businesses and members of the media. These requests have covered many topics including demographics, economic development, economic modeling and taxes.

The Comptroller also can provide local demographic data, identify business clusters and provide maps of regional roadways and waterways. For assistance, please visit www.window.state.tx.us/texasedge or e-mail texas.edge@cpa.state.tx.us.

The agency also provides local governments with information about tax-related programs and helps them identify opportunities to raise funds for economic development efforts through property, sales and franchise tax revenues, exemptions and credits. The agency also provides information on special assessments and other opportunities related to disaster relief.

The Comptroller's Texas Ahead web portal (<http://www.texasahead.org>) provides information on tax programs and incentives, best

practices and economic indicators, as well as reports and publications such as a recent report on Texas work force training entitled *Texas Works*. Texas EDGE also allows users to build customized models using region-specific data of their choosing.

Finally, the Comptroller's State Energy Conservation Office (SECO) can help local governments slash their energy costs and adopt cost-effective clean energy technologies. SECO offers local governments a free preliminary energy audit of their facilities. These audits provide recommendations for reducing electricity consumption by improving the efficiency of heating and air conditioning systems and lighting. SECO is anticipating an influx of federal funds through the American Recovery and Reinvestment Act to help local governments save energy, create or retain jobs, increase energy generation from renewable resources and reduce greenhouse gas emissions.

Travel and Tourism Industry Profile

Travel and tourism is the second largest "export-oriented" (serving consumers outside of the state) industry in Texas, behind oil and gas. In 2007, the industry's contribution to gross state product totaled \$23.1 billion. While the industry is important to the overall state economy, it is of even greater importance in rural regions.²⁸

In 2007, tourism accounted for 2.3 percent of earnings and 3.8 percent of employment in the state. As the table on page 30 shows, some counties in the Upper Rio Grande region rely more heavily on travel and tourism.

Travel and tourism supplies more than 10 percent of total employment in just five Texas counties, and two of them — Brewster County (20 percent) and Culberson

County (10.3 percent) — are in the Upper Rio Grande region. Furthermore, Brewster, Culberson and Jeff Davis counties are three of only five counties in the state that receive more than 10 percent of county revenue from tourism.²⁹

In 2007, travel and tourism employed 13,510 in the region, 17.2 percent more than in 1994. During this period, annual spending related to travel and tourism was nearly \$1.5 billion in 2007, up 82.4 percent from 1994. Related annual earnings totaled \$334 million in 2007, 68.6 percent more than in 1994. Local tax receipts were \$21.4 million and state tax receipts were \$80.1 million in 2007, up 72 percent and 67 percent, respectively, from 1994.³⁰



Travel and Tourism Industry Profile (cont.)

The region's four national parks and eight state parks are major tourist destinations. In 2008, its national parks attracted nearly 800,000 visitors, while nearly 240,000 people visited the state parks. Big Bend National Park led with 362,512 visitors, followed by Chamizal National Memorial with 197,767.³¹ Among state parks, Davis Mountain State Park had more than 128,000 visitors in 2008. More than half of these visitors (65,545) stayed at Indian Lodge.³²

Sales in the region's national parks produced an economic impact of nearly \$28 million in 2007.³³ This includes spending on hotels, campsites, restaurants, admission fees and retail purchases. In 2006, the region's state parks generated an economic impact of \$7 million. (See the Parks section on Page 53 for more details.)³⁴

Travel and Tourism Earnings and Employment by County Upper Rio Grande Region, 2007

Earnings (in millions)

County	Total	Travel and Tourism Related	Percent of County Earnings
Brewster	\$188	\$22	12%
Culberson	38	4	11
El Paso	15,482	304	2
Hudspeth	48	0	1
Jeff Davis	22	3	12
Presidio	71	2	2%
Total	\$15,849	\$335	

Source: Dean Runyan Associates.

Employment

County	Total	Travel and Tourism Related	Percent of County Employment
Brewster	6,710	1,340	20%
Culberson	1,750	180	10
El Paso	365,550	11,810	3
Hudspeth	1,750	20	1
Jeff Davis	1,340	100	8
Presidio	280	60	2%
Total	377,380	13,510	

Source: Dean Runyan Associates.

Direct Travel Impact, Upper Rio Grande Region, 2007

County	Total Direct Spending (in thousands)	Earnings (in thousands)	Employment	Tax Receipts (in thousands) Local	Tax Receipts (in thousands) State
Brewster	\$47,900	\$21,850	1,340	\$990	\$2,660
Culberson	35,580	4,020	180	330	2,240
El Paso	1,392,970	303,470	11,810	19,870	73,910
Hudspeth	5,640	330	20	-	360
Jeff Davis	7,670	2,720	100	-	430
Presidio	8,630	1,590	60	210	490
Total	\$1,498,390	\$333,980	13,510	\$21,400	\$80,090

Source: Dean Runyan Associates.



Historic Hotels in the Upper Rio Grande Region

The Upper Rio Grande region is home to three famous hotels that reflect the area's rich culture. The Gage Hotel in Marathon, the Hotel Paisano in Marfa and the Holland Hotel in Alpine provide rest, relaxation and unique atmosphere for thousands of tourists every year.

The Gage Hotel, located in Marathon, dates from the nineteenth century. In 1878, Alfred Gage came to West Texas to establish himself as a rancher, banker and businessman. He worked with El Paso architects Trost & Trost to build the Gage Hotel. Unfortunately, Gage never saw the hotel's glory days, as he passed away one year following the hotel's completion. A century later, the hotel was bought and restored by J.P. and Mary Jon Bryan, who worked to make the hotel reflect a mix of Spanish, Native American and Mexican cultures.

Modern additions to the hotel include a spa, fitness area and space for weddings and other social gatherings. The swimming pool is heated for year-round enjoyment. The Gage has added 20 adobe rooms and several freestanding cabins in addition to the original hotel building.³⁵

Marfa's Hotel Paisano was completed in 1930 by famed El Paso architect Charles Bassett. The hotel flourished due to its proximity to a railroad depot, serving as a stop for travelers passing through town on their way to the West Coast. Hotel Paisano was also a popular location for weddings and other gatherings. At times, its lobby served as an auction block for local ranchers selling cattle.

In 1955, the Hotel Paisano became a temporary home for the movie *Giant's* leading actors, James Dean, Elizabeth Taylor and Rock Hudson. The Paisano closed in the 1970s, but was restored beginning in 2001 to its original glory and now offers 33 rooms and suites along with spaces for social gatherings.³⁶

Alpine's Holland Hotel, built in 1912, served as a "civic, social, and historic center" for the booming mining town. An extensive addition was added in 1928. The hotel is located across the street from the railroad depot, giving it easy access to travelers and area newcomers. Today, the Holland is a full-service retreat with several types of rooms and suites, including offices and retail establishments on the ground floor and in the lobby.³⁷

The Camino Real Hotel and Resort, also as the Paso del Norte Hotel by its designer, was inspired by the local people of El Paso as well as the scenery surrounding the city. Construction was completed in 1912 with crystal chandeliers, a grand staircase and marble from an Italian craftsman. One especially unique aspect of the hotel is the 25-foot-diameter Tiffany-cut glass dome suspended by wires in the appropriately named Dome Bar. The lobby was a gathering spot for updates on the progress of the Mexican Revolution and later as a meeting spot to sell cattle. The White family continued their ownership of the hotel through generations, until TKG Investment Co. Ltd. bought it in 1970 with the promise to refurbish but keep its original integrity. By 2004 Camino Real Hotels & Resorts had completed a \$4.2 million remodel and update on the entire building. It is situated in downtown El Paso close to the convention center, allowing for good use of the 19 meeting rooms and 359 guest rooms and suites.³⁸

In 2008, these four hotels earned more than \$8.5 million in revenue and accommodated an estimated 100,000 overnight guests, mostly visiting from outside the region. Occupancy rates average around 65 percent of capacity for each hotel. Together, these historic tourist destinations employ more than 320 workers.³⁹

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- ¹⁴ Phone interview with Rob Hogan, District Economist for District 6 of the Texas A&M Agrilife Extension, Ft. Stockton Texas, 6/3/09.
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Demographics

The wide-open spaces of the Upper Rio Grande region are sparsely populated except for the city of El Paso, home to nearly all of the region's population and income growth. The region is largely Hispanic and young compared both to Texas as a whole and the U.S. Its residents' average educational attainment is lower than Texas and U.S. averages, as are their income levels.

The Upper Rio Grande region consists of six counties and includes the metropolitan statistical area (MSA) of El Paso, contained entirely within El Paso County. As defined

by the federal government, an MSA is a core urban area of 50,000 or more residents accompanied by adjacent communities that have a high degree of economic and social interaction with that core (as measured by commuting to and from work).¹

In 2008, the El Paso MSA had a population of 744,940, or 96.8 percent of the region's total population of 769,859. **Exhibit 8** illustrates the region's counties and their county seats.

Population Growth

El Paso also accounts for most of the region's population growth. **Exhibit 9** shows growth indices for Texas and the region, with 2003 as a base year. Between 2003 and 2013, El Paso's population is projected to rise by 12.5 percent, or 1.2 percent annually. Outside of El Paso County, the region's

In 2008, the El Paso MSA had a population of 744,940, or 96.8 percent of the region's total population of 769,859.



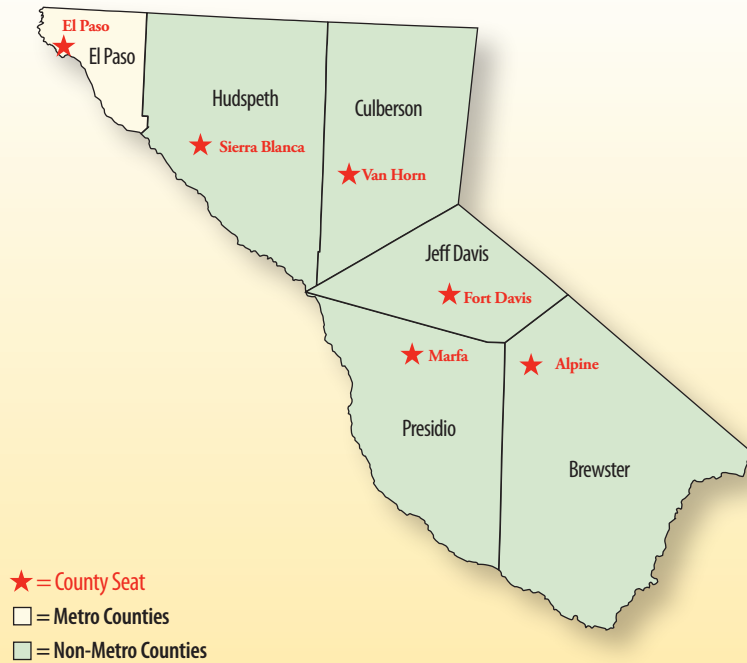
University of Texas at El Paso Classroom

PHOTO: University of Texas at El Paso, University Communications



Exhibit 8

Upper Rio Grande Metro Counties



Sources: Office of Management and Budget and Texas Comptroller of Public Accounts.

population should remain roughly unchanged at its 2003 level. By contrast, the state population is expected to increase by nearly 17 percent, or 1.6 percent annually, over this period.²

Ethnicity

The Upper Rio Grande population is predominately Hispanic, with an 81 percent share in 2008. Anglos accounted for 14 percent of the population and African Americans 2.4 percent. The remaining 2.6 percent fell in the “other” category, including persons of American Indian, Asian and Native Hawaiian descent and those claiming descent from two or more races (**Exhibit 10**).³

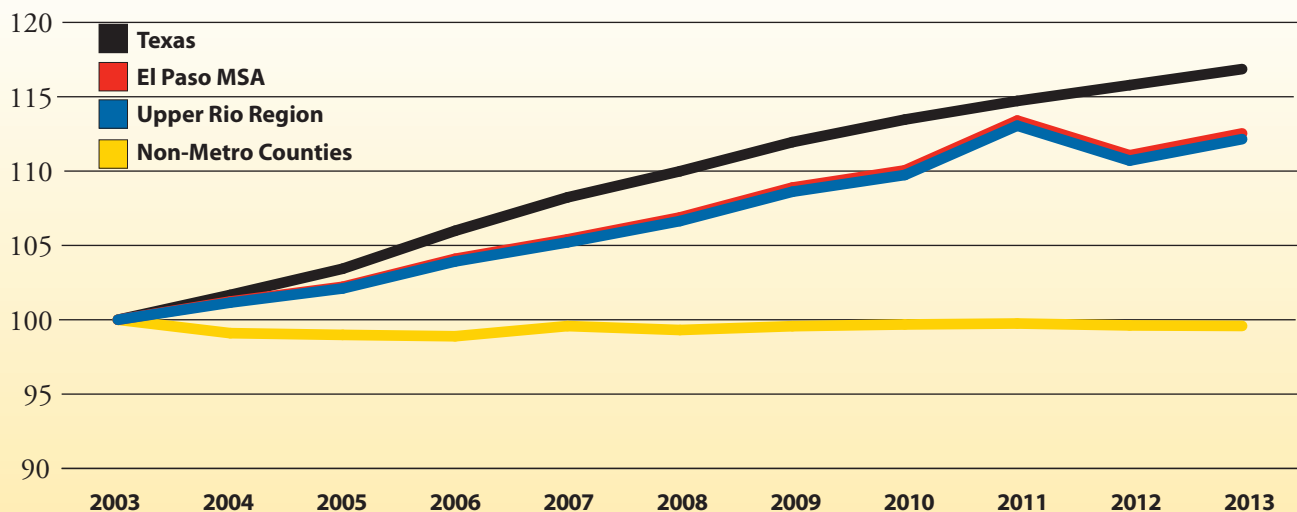
Age

The region’s ethnic makeup has significant implications for its age distribution.

(text continued on Page 38)

Exhibit 9

Upper Rio Grande Actual and Projected Population Increase, 2003-2013



Source: Economic Modeling Specialists Inc.



Terlingua Ghost Town

The town of Terlingua developed in the mid-1880s as a mining town when cinnabar, a mercury-bearing ore, was discovered in the area. Mines were established throughout the region and by the early 1900s, the mining town had grown to a thousand inhabitants with mail service, a water supply and other amenities. In the 1920s, Terlingua produced 40 percent of the nation's mercury. In 1942, however, the local mining company filed for bankruptcy and after World War II its new owners eventually ended mining operations in the area.

Terlingua became a classic Western ghost town. It began returning to life in the 1960s, as the site for what became known as the World Chili Championship. Terlingua became famous for its annual chili cook-off and was dubbed the "Chili Capitol of the World" by the Chili Appreciation Society.⁴

Currently, this unlikely tourist destination has 259 residents and plays host to visitors from around the world. Many abandoned commercial buildings and homes have been renovated. The La Posada Milagro guesthouse is billed as the area's largest restored "dry-stack" stone building and provides unique accommodations for visitors. The town's Starlight Theatre, once a movie house and theater for the miners, has been transformed into a restaurant, bar and dance hall providing entertainment for both local residents and visitors.⁵

Public Safety

Public safety plays a prominent role in the Upper Rio Grande region. According to the Texas Department of Public Safety (DPS) the region's overall crime rate fell from 2006 to 2007 (See chart below). Violent crime rose while property crimes declined.

According to DPS, the Upper Rio Grande region employed nearly 1,600 commissioned peace officers and almost 1,300 civilian workers in 2007. (A commissioned peace officer has taken training courses and is certified by the Texas Commission on Law Enforcement. Civilian staff includes administrative professionals, jailers and other non-certified workers.)

The Comptroller's office estimates that federal, state and local public safety positions in the region accounted for almost \$600 million in earnings in 2007.⁶

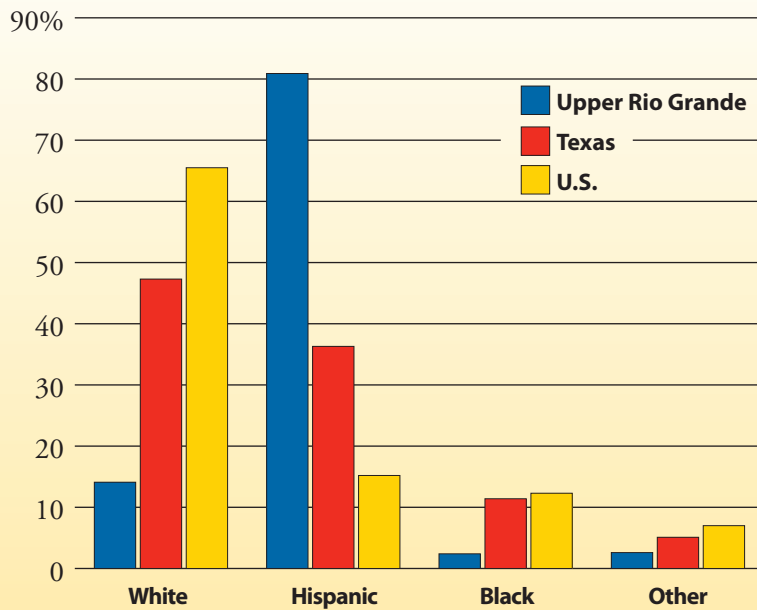
Crime Rates – Upper Rio Grande, 2006-2007

	2006 Upper Rio Grande Crime Rate	2006 Texas Crime Rate	2007 Upper Rio Grande Crime Rate	2007 Texas Crime Rate	Upper Rio Grande Change in Crime Rate	Texas Change in Crime Rate
Murder	2.9	5.9	2.6	5.9	-8.4	0.5
Rape	43.8	35.8	38.2	35.3	-12.8	-1.4
Robbery	71.2	158.5	71.6	162.2	0.5	2.3
Assault	254.8	317.4	281.0	307.8	10.3	-3.0
Violent Crime	372.6	517.6	393.4	511.2	5.6	-1.2
Burglary	375.1	917.8	383.1	955.2	2.1	4.1
Larceny	2,243.0	2,756.9	2,227.9	2,771.4	-0.7	0.5
Auto Theft	508.0	407.3	431.9	393.3	-15.0	-3.4
Property Crime	3,126.1	4,082.0	3,042.9	4,119.9	-2.7	0.9
Total Crime Rate	3,498.6	4,599.6	3,437.6	4,631.1	-1.7	0.7

Note: All crime rates are reported per 100,000 population.
Source: Texas Department of Public Safety.



Exhibit 10

Upper Rio Grande Region, Texas and U.S. Population by Ethnicity, 2008

Source: Economic Modeling Specialists Inc.

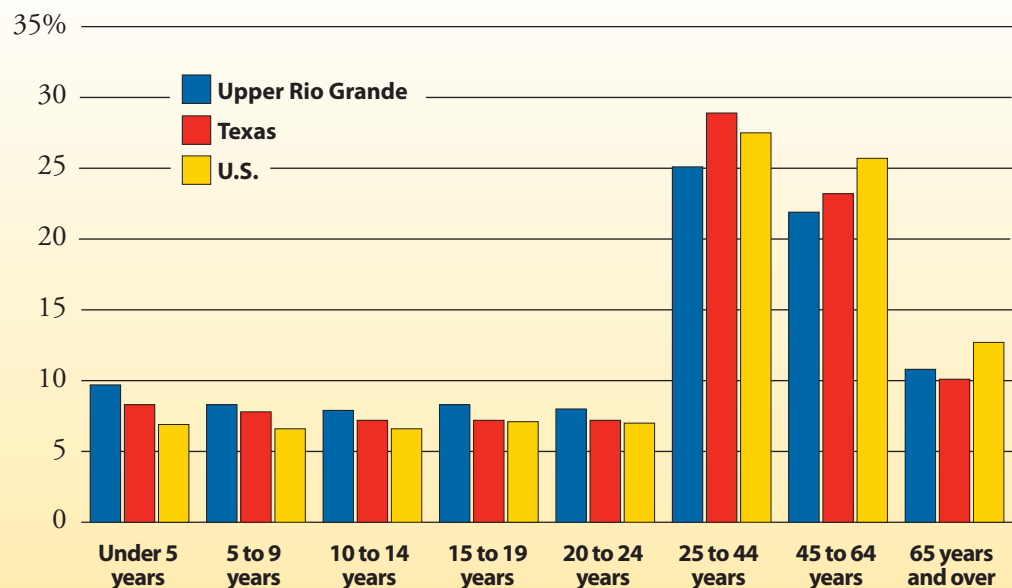
In 2000, the median age of Texas Hispanics was 25.5 years, compared to 29.6 years for African-Americans and 38.0 years for Anglos.⁷

With its large Hispanic population, the Upper Rio Grande's population is very young compared to those of Texas as a whole and the U.S. More than 42 percent of the region's residents were under the age of 25 in 2008, compared to 37.7 percent in Texas and 34.1 percent in the U.S. Furthermore, nearly 10 percent of the region's residents were under the age of five, compared to 8 percent in Texas and 7 percent in the U.S. (Exhibit 11).

Educational Attainment

The average educational attainment of Upper Rio Grande residents is lower than both Texas and U.S. averages. Thirty-two percent

Exhibit 11

Upper Rio Grande Region, Texas and U.S. Population by Age, 2008

Source: Economic Modeling Specialists Inc.



El Paso Mission Trail

In 1598, Don Juan de Oñate was chosen to lead an expedition to settle the lands of present-day New Mexico. He took with him 500 colonists, including soldiers, their wives and children, Indians, servants, clergy and livestock. This caravan created a series of new missions and communities.

One of these, Ysleta mission, is the “oldest continuously active parish in the State of Texas,” located in the oldest town in Texas, Ysleta (now a part of El Paso). The settlement began with a temporary church built in 1660; a larger mission was built in 1692 and subsequently destroyed twice by flood in 1740 and 1829. Fire consumed the church in 1907 but the sacristy survived.

Mission Socorro was founded in 1680. This mission also saw cycles of flood damage and rebuilding. The ceiling beams and supports have been dated to 1691. A massive restoration project concluded in 2005 with a restored irrigation system and plaza.

Presidio Chapel San Elizario was originally built as a church serving a military fort built by the Spanish government in 1684. The original church was destroyed by flooding in 1829, but was subsequently rebuilt; the current building was completed in 1882. The presidio’s military mission lost importance when Mexico won its independence but by then the surrounding area had developed into a large settlement that became the first seat of El Paso County in 1850. The area is home to orchards, a plaza and historical district.⁸

The El Paso Mission Association conducts tours of these sites.⁹ In 2008, the association guided tours for about 3,000 visitors. The mission trail also offers self-guided tours. The association estimates that the missions received about 6,000 visitors in 2008. In April 2009, the association held its first annual Thanksgiving Pageant, which attracted over 500 participants. The association works diligently to preserve the history of the trail and to share its history with locals and tourists.¹⁰

of Upper Rio Grande residents above the age of 25 have less than a high school diploma, versus 22 percent for Texas as a whole and just 14 percent for the U.S. Only 23 percent of the region’s residents have earned an associate, bachelor’s or graduate degree, compared to 31 percent of all Texans and 34 percent of U.S. residents (**Exhibit 12**).¹¹

Income

The region’s average income levels also fall below the state’s. In 2007 (most recent data available), the median household income for a Texas family of four was \$47,563. Within the Upper Rio Grande region, Jeff Davis County had the highest median household income at \$38,850, while Hudspeth

County’s was lowest at \$25,095 (**Exhibit 13**). El Paso County’s median household income was \$35,116 in 2007.¹²

Such comparisons, however, do not take the cost of living into account. A cost-of-living adjustment facilitates a more accurate comparison of income.

For instance, a person earning an annual salary of \$35,000 in El Paso has the same purchasing power as a person living in Dallas earning \$40,646, a difference of about 16 percent. In Austin, the equivalent purchasing power would be \$42,046.¹³

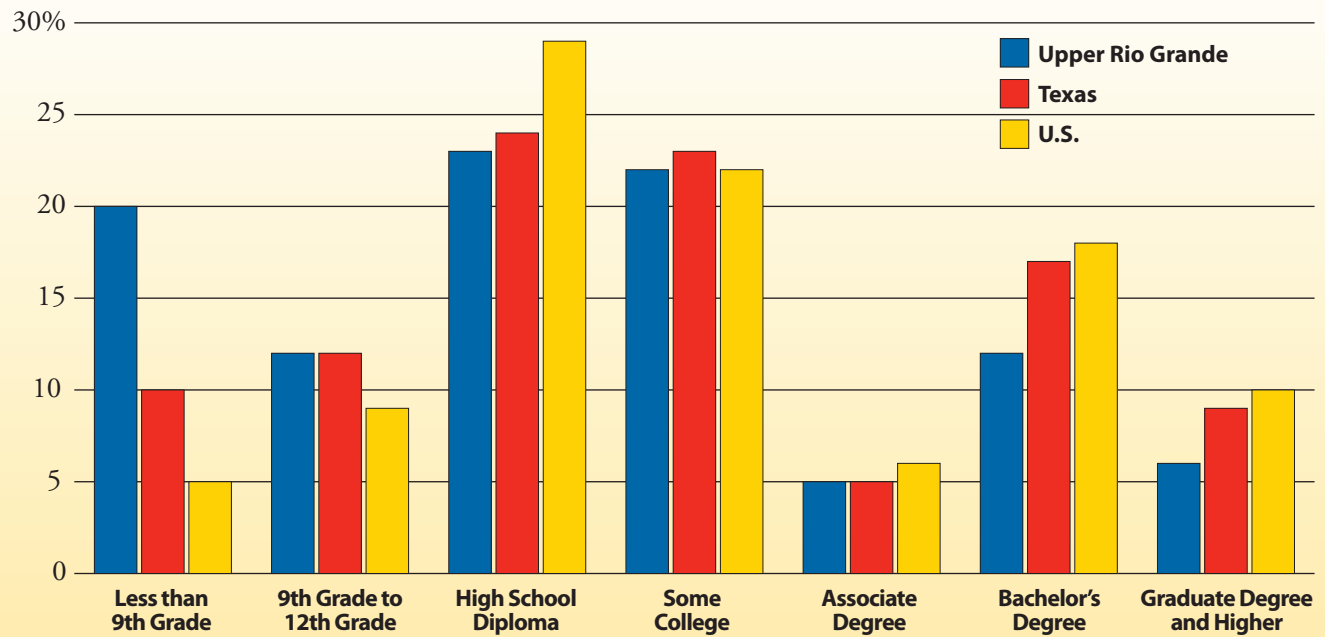
The region’s income per person averaged \$26,491 in 2007, or 71 percent of the state average of \$37,083. Brewster County had

(text continued on Page 41)



Exhibit 12

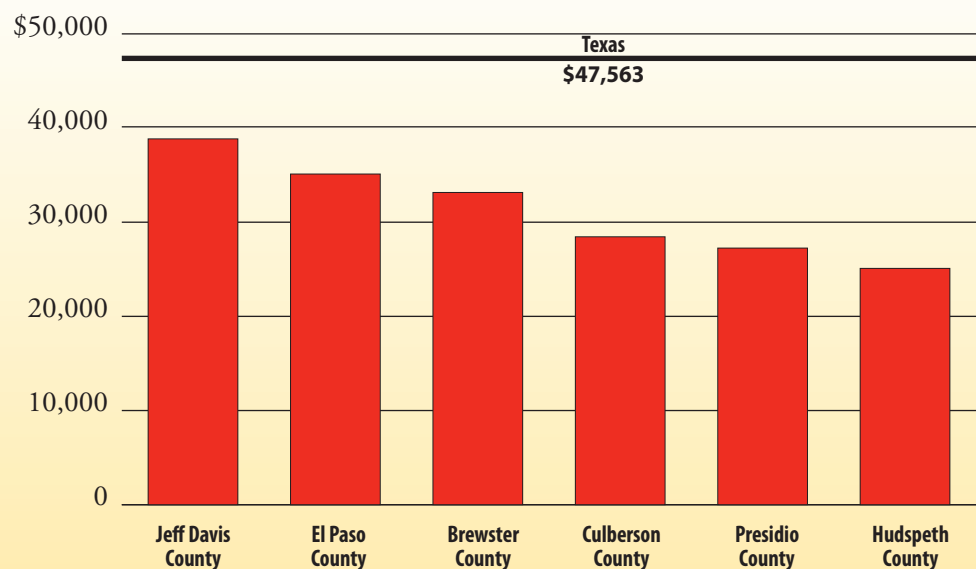
Educational Attainment for Population Over the Age of 25, Upper Rio Grande, Texas and U.S. Averages, 2008



Source: Economic Modeling Specialists Inc.

Exhibit 13

Median Household Income, Upper Rio Grande Counties, 2007



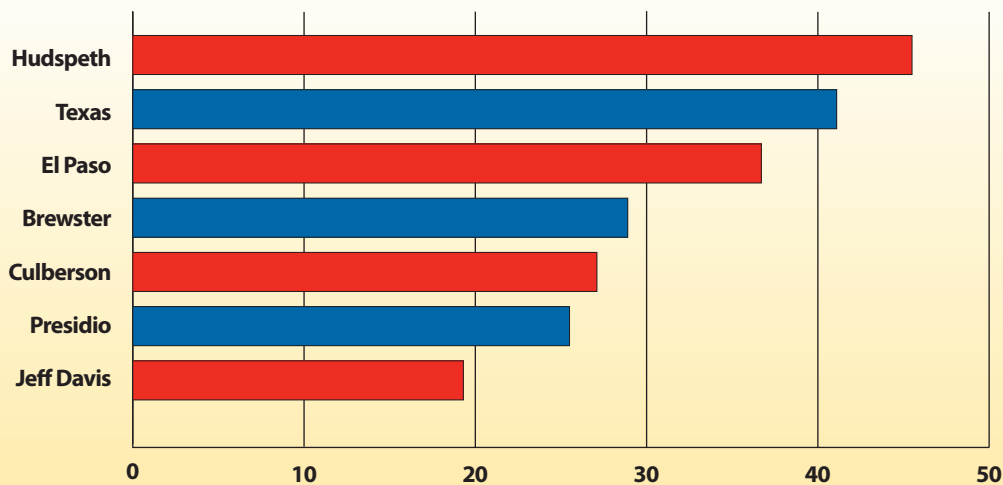
Sources: U.S. Census Bureau and Texas Comptroller of Public Accounts.



the region's highest per capita income at \$29,103, followed by El Paso County at \$26,585. Total personal income in the region rose by 36.4 percent between 2002 and 2007, compared to 41.1 percent for the state as a whole (**Exhibit 14**).¹⁴

Exhibit 14

Upper Rio Grande Personal Income Percent Increase 2002-2007



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Total personal income in the region rose by 36.4 percent between 2002 and 2007, compared to 41.1 percent for the state as a whole.

The Marfa Lights

The first recorded sighting of the famed Marfa Lights occurred in 1883, although some say that Native Americans had older legends of the lights. Old-timers of the area still recount stories of mysterious encounters with the lights, which appear just after sunset.

The Marfa Lights can be seen from U.S. 90 just east of Marfa, looking toward the Chinati Mountains. The lights have been variously reported as resembling stars or distant headlight beams. They can appear to dance or move about but always appear in the same general area.

Marfa High School students, in conjunction with the Texas Department of Transportation, designed and built a unique observation center nine miles east of the town on U.S. 90. This observation center provides an excellent vantage point to the view the lights and is open every day after sunset.¹⁵

Currently, there is no one official explanation for the phenomena. In the early 1970s, Sul Ross State University scientist Donald Witt attempted to uncover the mystery behind them, initially concluding that the lights originated from nearby M.E. Ranch and auto headlights on U.S. 67. In 1974, however, Witt experienced the lights in their full brilliance one night and decided that his initial judgment had been too hasty. Other theories include atmospheric light refraction, mineral reactions to heat or light, secret military technology and, needless to say, ghosts.¹⁶

Every year, the city of Marfa celebrates its local wonder with a festival held over Labor Day weekend in September, including a parade, arts and crafts displays, concerts and other attractions. The festival takes place both during the day and at night and often serves as a reunion opportunity for current and former Marfa residents.¹⁷



Famous People from the Upper Rio Grande Region

The Upper Rio Grande region has produced a wide variety of celebrities. Movie, television and Broadway star Debbie Reynolds was born in El Paso in 1932. Another actor and former radio deejay, Thomas Haden Church, was born in El Paso in 1960.

Gene Roddenberry, creator of the television series *Star Trek*, was born in El Paso, as were television news personality Sam Donaldson and former Supreme Court Justice Sandra Day O'Connor.¹⁸

Endnotes

- ¹ U.S. Census Bureau, "Metropolitan and Micropolitan Statistical Areas," p. 1, <http://www.census.gov/population/www/metroareas/metroarea.html>. (Last visited May 1, 2009.)
- ² Economic Modeling Specialists, Inc., "Demographic Data Report Spring 2009." Custom queries created.
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- ⁴ The Handbook of Texas Online, "Terlingua, Texas," <http://www.tshaonline.org/handbook/online/articles/TT/hnt13.html>. (Last visited May 1, 2009.)
- ⁵ City-data.com, "Study Butte-Terlingua, Texas," <http://www.city-data.com/city/Study-Butte-Terlingua-Texas.html>; Big Bend Chamber of Commerce and Brewster County Tourism Council, "Historic Terlingua, Texas," http://www.historic-terlingua.com/historic_terlingua_ghostown_001.htm; Big Bend Chamber of Commerce and Brewster County Tourism Council, "La Posada Milagro Guesthouse," http://www.historic-terlingua.com/historic_terlingua_ghostown_016.htm; and Big Bend Chamber of Commerce and Brewster County Tourism Council, "Starlight Theater," http://www.historic-terlingua.com/historic_terlingua_ghostown_008.htm. (Last visited May 1, 2009.)
- ⁶ Texas Department of Public Safety, "Texas Crime Report for 2006, Chapter 9: Crime by Jurisdiction," <http://www.txdps.state.tx.us/crimereports/06/cit06ch9.pdf>, "The Texas Crime Report for 2007, Chapter 7: Texas Enforcement Personnel," <http://www.txdps.state.tx.us/crimereports/07/citch7.pdf> (Last visited May 26, 2009); and Texas Workforce Commission, "Quarterly Census of Employment and Wages (QCEW)," <http://tracer2.com/cgi/dataanalysis/AreaSelection.asp?tableName=Industry>. (Last visited March 24, 2009.) Custom query for Upper Rio Grande WDA, Code 9221: Justice, Public Order, and Safety Activities.
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- ⁸ El Paso County, Texas, "The El Paso Mission Trail," <http://www.epcounty.com/history/missiontrail.htm>. (Last visited May 1, 2009.)
- ⁹ The El Paso Mission Tour Association, "Mission Tours," http://www.themissiontrail.net/mission_tours.html. (Last visited May 1, 2009.)
- ¹⁰ E-mail communication from Ben Sanchez, executive director, El Paso Mission Trail Association, San Elizario, Texas, April 13, 2009.
- ¹¹ Economic Modeling Specialist, Inc., "Educational Attainment Data Report." Custom queries created.
- ¹² U.S. Census Bureau, "Small Area Income & Poverty Estimates: State and County Interactive Tables," <http://www.census.gov/did/www/saiper/county.html>. (Last visited May 1, 2009.) A custom query was created for Upper Rio Grande counties.
- ¹³ Sperling's Best Places, "Cost of Living Calculator," <http://www.bestplaces.net/col/>. (Last visited May 1, 2009.) Custom queries were created comparing El Paso to Austin and Dallas, Texas.
- ¹⁴ U.S. Bureau of Economic Analysis, "Regional Economic Accounts: Table CA1-3 — Personal Income, Population, Per Capita Personal Income," <http://www.bea.gov/regional/reis/default.cfm?selTable=ca1-3§ion=2>. (Last visited May 1, 2009.) Custom queries created for Texas population, personal income and per capita personal income.
- ¹⁵ Marfa Chamber of Commerce, "Marfa Lights," <http://www.marfacc.com/todo/marfalights.php>. (Last visited May 1, 2009.)
- ¹⁶ Texas Monthly, "Marfa Lights," by Gary Cartwright, <http://www.texasmonthly.com/ranch/readme/marfa.php>. (Last visited May 1, 2009.)
- ¹⁷ Marfa Chamber of Commerce, "Marfa Lights."
- ¹⁸ DebbieReynolds.com, "Debbie Reynolds Biography," pp. 1-3, <http://www.debbiereynolds.com/debbie-reynolds-biography.htm>; Internet Movie Database, "Biography for Thomas Haden Church," <http://www.imdb.com/name/nm0002006/bio>; Internet Movie Database, "Biography for Gene Roddenberry," <http://www.imdb.com/name/nm0734472/bio>; Academy of Achievement, "Sam Donaldson," <http://www.achievement.org/autodoc/page/don0bio-1>; and Cornell University Law School, "Sandra Day O'Connor (1981-2006)" <http://www.law.cornell.edu/supct/justices/oconnor.bio.html>. (Last visited May 1, 2009.)



Infrastructure

An area's infrastructure — its water and energy supplies, parks and transportation systems — can determine its economic viability. This is certainly the case in the Upper Rio Grande region, with an arid landscape that provides unique challenges and advantages for its inhabitants.

The Upper Rio Grande is part of an important trade corridor between Mexico and the U.S. While it has little traditional energy production, it has a strong potential for alternative energy sources such as solar, wind and geothermal energy. And its impressive array of parks and recreational facilities attract visitors from around the world. All of

these resources give the economy of the Upper Rio Grande region a unique dimension.

The six-county Upper Rio Grande region, from Brewster County and Big Bend National Park in the Southeast to El Paso County in the Northwest, is a land of stark beauty situated on the northeastern edges of the mountainous Chihuahuan Desert (**Exhibit 15**).

While primarily desert, the region also has the state's seven highest peaks, all rising above 8,000 feet, giving the area the widest climatological variety in Texas (**Exhibit 16**). The lower desert elevations receive an average of 10 to 15 inches of rainfall annually with average maximum daily temperatures up to 80 degrees Fahrenheit, while the mountainous areas can average 20 inches annually with average maximum daily temperatures of 72 degrees.¹

The Upper Rio Grande is part of an important trade corridor between Mexico and the U.S.



Paso del Norte International Bridge border crossing in El Paso, TX

PHOTO: Texas Transportation Institute at Texas A&M University



Water

Water is an extremely precious commodity in any desert. The Rio Grande River is the region's only source of surface water, providing 56.6 percent of all the water it consumes. El Paso County is the largest consumer of

water from the Rio Grande, using it primarily for municipal and irrigation consumption. Because the region has no lakes, its citizens rely primarily on groundwater for all uses except irrigation (**Exhibit 17**).

Of the region's total water usage, irrigation accounts for 71 percent, with municipal use at 26.2 percent. Manufacturing uses 1.7 percent, slightly more than half of the remainder, while steam electric generation, livestock and mining uses account for the last 1.2 percent (**Exhibit 18**).

The Upper Rio Grande's only significant crop, as reported by the U.S. Department of Agriculture's National Agricultural Statistics Service, is irrigated cotton, both upland and American pima varieties. Since 2000, the region has averaged 2.8 percent of the state's planted acreage of irrigated cotton, 3.1 percent of the acres harvested and 4.2 percent of the state's production of both varieties combined.²

Every county in the Upper Rio Grande region produces cattle, although herd numbers for beef and dairy cattle combined have

(text continued on Page 46)

Exhibit 15

Chihuahuan Desert, Upper Rio Grande Region

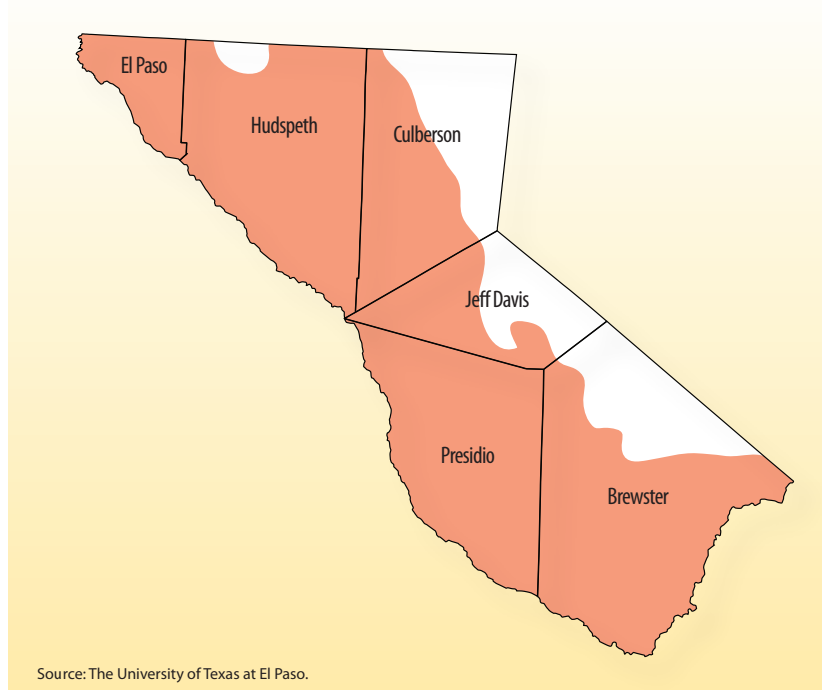


Exhibit 16

Texas' Highest Mountain Peaks

Name	County	Elevation
Guadalupe Peak	Culberson	8,749
Bush Mountain	Culberson	8,631
Shumard Peak	Culberson	8,615
Bartlett Peak	Culberson	8,508
Mount Livermore (also called Baldy Peak)	Jeff Davis	8,378
Hunter Peak (also called Pine Top Mountain)	Culberson	8,368
El Capitan	Culberson	8,085

Source: Texas Almanac 2008-2009.



Air Quality

The Texas Commission on Environmental Quality (TCEQ) monitors air quality in the El Paso/Juarez metropolitan areas, as well as at sites in Big Bend National Park and in the Davis Mountains at the McDonald Observatory. Each location's Air Quality Index (AQI) is calculated on a daily basis. According to TCEQ, the area's AQI scores typically fall in the "good" to "moderate" range; an AQI between 0 and 50 is good, and between 51 and 100 is considered moderate.

El Paso and Juarez air quality, however, occasionally deteriorates, especially in hot weather that exacerbates ozone problems. The AQIs for these neighboring cities can climb into the "unhealthy for sensitive groups" range (101 – 150) and, in Juarez, the "unhealthy" range (151 – 200). Naturally, the monitors in the park and mountains are more likely to find good air quality on a consistent basis, although Big Bend does experience ozone pollution.³

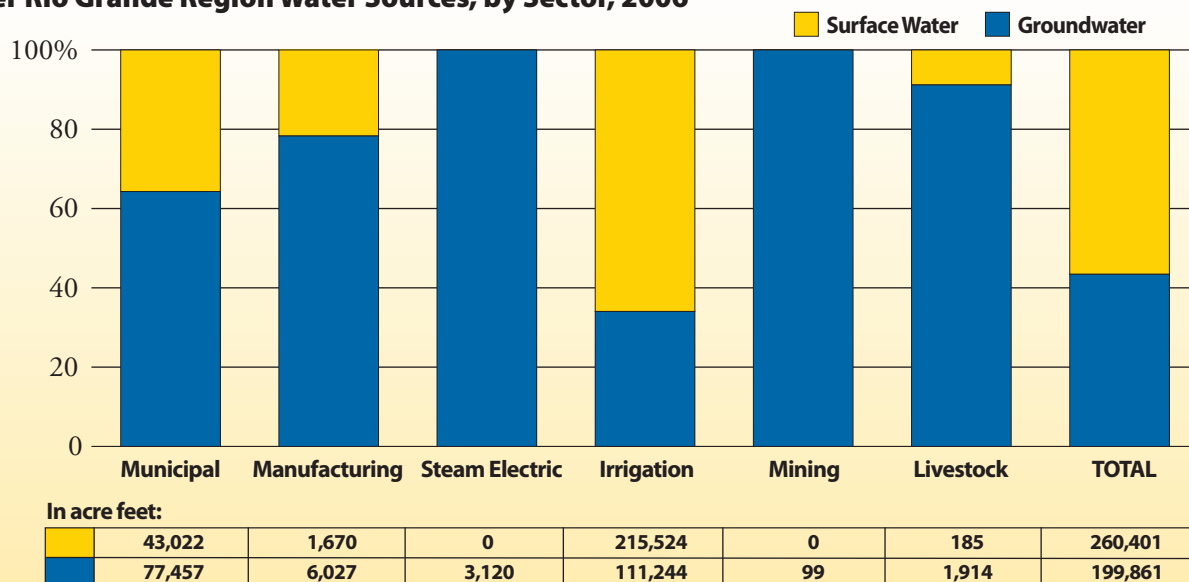
Climate

The Upper Rio Grande region has some of the nation's most distinctive landscapes, vegetation and geology. Mountains, desert, canyons, salt lakes and a fertile river valley all spread beneath the intense sun and brilliant stars of far West Texas. The region typically experiences its first freeze around November 16th with freezes departing in most of the counties by March 16th on average. Culberson and Jeff Davis counties, with their higher elevations, have an average last freeze date of March 31.

Average lows in January range from 25.1°F in Hudspeth County (and slightly lower in Marfa) to the mid-thirties in parts of Brewster County (Big Bend) and Presidio County (Presidio). July average maximums range from 94.5°F in El Paso County (with the average in the city of Presidio topping that at nearly 101°F) down to the mid- to upper eighties in other parts of the region. The region's annual rainfall averages exceed 20 inches only at Mount Locke in Jeff Davis County (20.37 inches), with Brewster County as a whole receiving the largest average amount, about 18 inches. El Paso County averages only 9.4 inches of rain per year.⁴

Exhibit 17

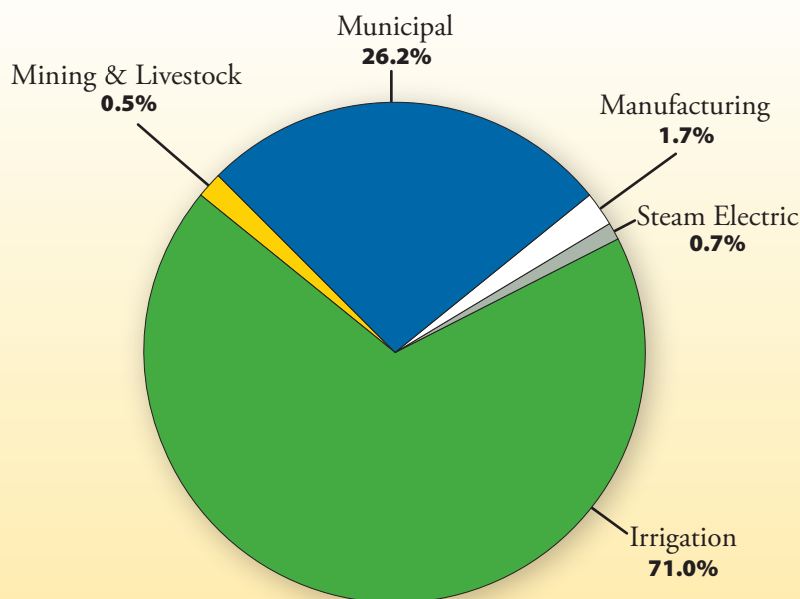
Upper Rio Grande Region Water Sources, by Sector, 2006



Source: Texas Water Development Board.



Exhibit 18

Upper Rio Grande Region Total Water Use, 2006

Note: Numbers may not add due to rounding.

Sources: Texas Water Development Board and Texas Comptroller of Public Accounts.

declined from 177,000 in 2000 to 110,000 in 2008, due in large part to a bovine tuberculosis eradication effort in El Paso County. Starting in 2002, the USDA offered a dairy cow buy-out program to producers to eliminate bovine TB in the county. The program had enough success by 2006 to lift dairy restrictions placed on Texas by the USDA.⁵

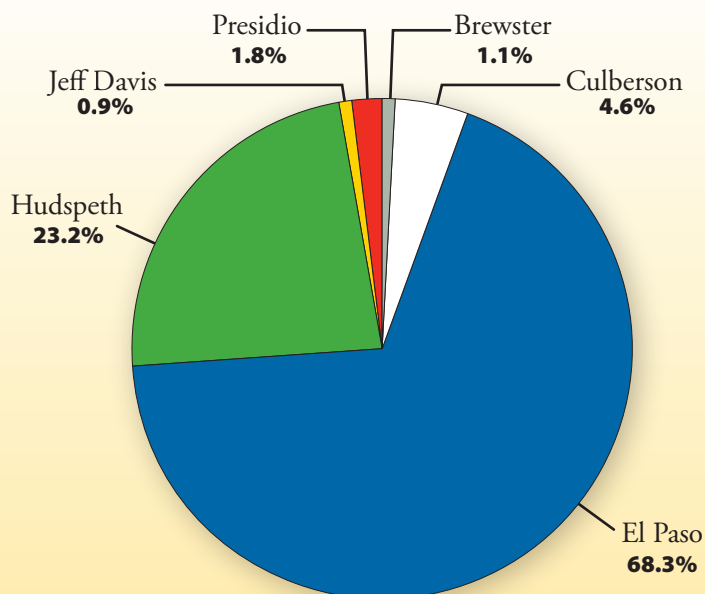
In 2006, El Paso County consumed 68.3 percent of the region's water. Hudspeth County followed with 23.2 percent; Culberson County used 4.6 percent; Presidio County, 1.8 percent; Brewster County, 1.1 percent; and Jeff Davis County used less than 1 percent (**Exhibit 19**).⁶

The Upper Rio Grande area comprises almost all of the Texas Water Development Board's (TWDB's) planning Region E. Region E also includes Terrell County. According to TWDB, in the next 50 years Upper Rio Grande counties should expect to see a decrease in irrigation water usage, no change in livestock use, a small increase in mining and manufacturing use and a significant increase in steam electric and municipal water use (**Exhibit 20**).⁷

The Rio Grande

Texas shares the Rio Grande River with the states of Colorado, New Mexico and the Republic of Mexico (**Exhibit 21**). Its waters are controlled upstream of the long-abandoned Civil War-era Fort Quitman in Hudspeth County by the Rio Grande Compact Commission (RGCC), and downstream of Fort Quitman by the International Boundary and Water Commission (IBWC), comprising representatives of the U.S. and Mexico. Because the Rio Grande accounts for almost

Exhibit 19

Upper Rio Grande Region Total Water Consumption, by County, 2006

Note: Numbers may not add due to rounding.

Sources: Texas Water Development Board and Texas Comptroller of Public Accounts.



Exhibit 20

**Upper Rio Grande Actual and Projected Water Use by Sector 2000-2060
(in acre feet)**

Sector	2000 Actual	2020 Projected	2040 Projected	2060 Projected
Irrigation	508,186	471,833	452,079	435,587
Livestock	4,536	4,536	4,536	4,536
Manufacturing	7,750	10,000	11,373	12,861
Mining	2,256	2,275	2,290	2,309
Municipal	139,221	183,314	217,433	251,740
Steam Electric	2,962	6,937	9,541	13,410
Total	664,911	678,895	697,252	720,443

Source: Texas Water Development Board.

all of the region's surface water, decisions by these two authorities can have great influence on the region's economy and way of life.

The Rio Grande originates in the San Juan Mountains of southern Colorado, flowing south for 175 miles until it reaches New Mexico, where it continues for another 470 miles until reaching Texas.⁸ The Rio Grande Compact, an interstate agreement approved by each of the three U.S. states, ratified by Congress and signed by the President in 1939, apportions water equitably among the states. The RGCC, which administers the compact, has one representative from each of the three states in addition to a federal representative. RGCC's headquarters is in El Paso.⁹

Although the Upper Rio Grande region of Texas has no reservoirs on the river, New Mexico has two, Elephant Butte and Caballo, plus several smaller dams that direct its waters into canals. The U.S. Bureau of Reclamation manages these reservoirs to provide water for municipal use and crop irrigation to about 178,000 acres of land, including 69,000 acres in El Paso County,

the latter under the jurisdiction of the El Paso County Improvement District. Another 18,000 acres in Hudspeth County receive water as available.¹⁰

Founded in 1889, the IBWC was established to assist the U.S. and Mexico with determining national boundaries and managing common waters from San Diego, California to Brownsville, Texas. The 1944 treaty "Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande," plus several earlier treaties and subsequent amendments (called "minutes"), is now subject to IBWC management.

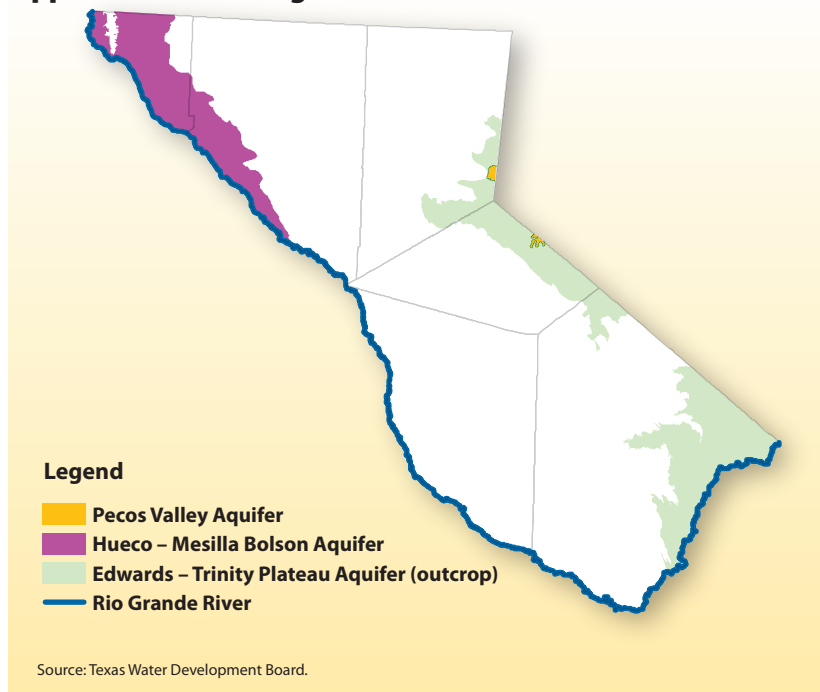
Under that treaty, the U.S. is entitled to all the water flows reaching the main channel of the Rio Grande River from several specific creeks on the U.S. side; one-third of flows from six different Mexican tributaries; and half of all flows south of Fort Quitman in Hudspeth County.¹¹

Groundwater

According to TWDB, 75 percent of Region E's groundwater comes from two major



Exhibit 21

Upper Rio Grande Region Water Sources

aquifer systems — the Edwards-Trinity (Plateau) and the Hueco and Mesilla Bolsons — and six smaller ones (**Exhibit 21**).

Salinity control is a challenge for both ground and surface waters in this area. The Hueco and Mesilla Bolsons provide groundwater with relatively high levels of total dissolved solids (TDS) that give the water a brackish taste and, over time, can be detrimental to humans, plants and wildlife. (“Bolson” is a Spanish word meaning purse, or pouch; these two aquifers overlay each other but have little hydrological interaction.)

According to TWDB, the Hueco Bolson ranges from less than 1,000 to 3,000 milligrams per liter (mg/l) TDS. The upper limit of Mesilla Bolson waters is closer to 10,000 mg/l TDS. Experts consider water above

The Forgotten River

The stretch of the Rio Grande between Fort Quitman, near Sierra Blanca, down to Presidio and beyond, has been called the “Forgotten River.” With no cities or towns on the river until Presidio, it’s a flowing oasis through arid ranchlands. Or at least that’s how it used to be.

Now, the river has been slowed and altered by dams and withdrawals upstream, while its water quality has been degraded by municipal wastewater flows, agricultural runoff and dissolved salt from stands of tamarisk, also known as saltcedar.

Saltcedar, an exotic, invasive plant originally introduced to this country in the 1800s as an erosion control method for stream banks, as well as for ornamental use, has become an ecological nightmare. It crowds out and out-drinks native willows and cottonwoods in the riparian habitat along rivers, and exudes salt from its leaves that eventually concentrates in the river water. The Forgotten River’s channel is choked, its flow is further reduced and traditional crops fail to thrive when irrigated with its salty water.

Numerous agencies and groups, including the Texas Commission on Environmental Quality, the U.S. Army Corps of Engineers, the Trans-Pecos Water Trust and the Environmental Defense Fund, have studied and monitored this stretch of the Rio Grande, trying to find ways to restore this unique and valuable resource. Addressing the saltcedar problem is part of those efforts, and since 2001 releases of saltcedar beetles have shown signs of being an effective weapon against the plant.¹²

Saltcedar, however, is only one aspect of the Forgotten River’s severe problems. Restoring the river to viability will require cooperation between various water users, local management agencies, river advocates, states and even nations. The Forgotten River should not be forgotten much longer.



Kay Bailey Hutchison Desalination Plant

The Hueco Bolson aquifer has long been a major source for El Paso's water. The amounts of fresh water pumped from the aquifer, however, have exceeded the rate at which these waters are being replaced by nature. The majority of the aquifer's water is brackish; salty waters actually exceed the amount of potable water in the aquifer by about 600 percent. Realizing this, the El Paso Water Utility began looking at desalination alternatives for the Hueco Bolson Aquifer in the early 1990s.

El Paso Water Utilities' (EPWU's) Kay Bailey Hutchison Desalination Plant, completed in 2007, is one of the world's largest inland desalination plants and represents the "largest public-private project of its kind" involving the Defense Department. The plant is the result of a public-private partnership between Fort Bliss and EPWU.

The plant produces 27.5 million gallons of fresh water per day from brackish groundwater supplies that were previously unusable. It has increased El Paso's water production by 25 percent, and includes a learning center, groundwater wells, transmission pipelines and storage and pumping facilities.

EPWU estimates that 83 percent of the water is recovered, as brackish water flows through fine, reverse-osmosis membranes, resembling thick rolls of wax paper, which separate out salts and other potential contaminants and pollutants. The plant supplements other fresh water supplies in the region to ensure a continued water supply for the next 50 years.¹³

10,000 mg/l TDS to be salty; seawater typically is above 35,000 mg/l TDS.¹⁴

Future Needs

To prepare for future population increases and constrained water sources, the Upper Rio Grande region intends to increase municipal conservation; recover, clean and reuse municipal water for municipal purposes; and increase imports of desalinated water.¹⁵ The city of El Paso has an active municipal conservation plan in place with an eventual use goal of 140 gallons per resident per day, down from the present 170-180 gallons per capita.¹⁶

Transportation

The Texas Department of Transportation (TxDOT) builds and maintains the Texas highway system through local offices and

alliances with contractors located around the state. TxDOT serves the Upper Rio Grande region from office locations in East El Paso, West El Paso and Alpine.

In all, the region has 1,927 centerline miles (miles traveled in a single direction regardless of the number of lanes) and 4,799 total lane miles of state highways. It has about 593,000 registered vehicles that travel about 12.8 million miles daily. The state as a whole contains 79,975 centerline miles, 192,542 total lane miles and more than 21 million registered vehicles that travel nearly 490 million miles each day (**Exhibit 22**).¹⁷

TxDOT has prioritized the following repair and expansion projects in the region:

- I-10, running southeast through El Paso county and continuing east through Hudspeth and Culberson counties;

The city of El Paso has an active municipal conservation plan in place.



Exhibit 22

Highway Miles, Vehicle Miles Driven and Registered Vehicles, Upper Rio Grande Region, 2008

County Name	Centerline Miles	Lane Miles	Daily Vehicle Miles	Registered Vehicles
Brewster	290	591	250,341	10,003
Culberson	322	748	683,479	2,315
El Paso	477	1,621	10,276,798	566,539
Hudspeth	340	826	1,223,637	3,566
Jeff Davis	227	469	193,263	3,198
Presidio	272	545	182,369	7,469
Region Total	1,927	4,799	12,809,887	593,090
Statewide Total	79,975	192,542	488,790,361	21,171,729

Source: Texas Department of Transportation.

- U.S. Highway 67, running northeast from the U.S.-Mexico Border at Presidio to Marfa in Presidio County;
- U.S. Highway 62, running west to east across El Paso, Hudspeth and Culberson counties, and then up into New Mexico;
- State Highway 54, running south to north through Culberson County;
- U.S. Highway 90, running southeast through Culberson, Jeff Davis, Presidio and Brewster counties;
- Loop 375, a partially completed loop around the city of El Paso; and
- State Highway 20, running parallel to I-10 through El Paso county and part of Hudspeth County.¹⁸

Ports of Entry

The Upper Rio Grande region serves as an international gateway between Texas and Mexico. The region is home to seven of the state's 26 border crossings between Texas and Mexico, four of which link the city of El Paso to the Mexican city of Juarez.¹⁹ These crossings, all of them bridges, receive a mix

of commercial, passenger and pedestrian traffic. The Bridge of the Americas receives the most use of any crossing in the region, with more than half of El Paso's border traffic flowing across it.²⁰

In 2008, more than 765,000 trucks, 14 million personal vehicles and 8 million pedestrians passed through the seven ports of entry in the Upper Rio Grande region.²¹

Point-of-entry operations at these border crossings, such as vehicle inspections, are a primary cause of traffic congestion. TxDOT is exploring methods to reduce wait times at the area's various crossings, and the city of El Paso has proposed expanding one of its bridges, the Ysleta Zaragoza, to accommodate more traffic. TxDOT, the El Paso Metropolitan Planning Organization and the city of El Paso are also jointly considering the construction of two additional commuter bridges in the region to mitigate traffic congestion.

A new point of entry, the Guadalupe Tornillo International Bridge, being built in the city of Tornillo, Texas is expected to be completed by 2015.²²



Trade Corridors

As a center for interstate and international trade, the Upper Rio Grande region must maintain healthy trade corridors. Its most important trade corridor, Interstate Highway 10, runs parallel to the Rio Grande River in El Paso County and breaks away from the Rio Grande in Hudspeth County to head east across Texas and several other southern states. In all, I-10 stretches across eight states, originating in California and heading eastward all the way to Florida. These states depend on I-10's continuing smooth operation to transport high volumes of goods.

To help maintain this critical trade route, TxDOT has initiated a number of projects to resurface and repair damaged portions of the highway in the Upper Rio Grande region.²³

In addition to sustaining the current benefits of I-10, TxDOT and local transportation stakeholders also plan to provide alternatives for I-10 commuters in case of traffic delays or natural disasters. For example, the city of El Paso has undertaken a large-scale project to build Loop 375 around the city so that travelers have an alternative route if I-10 access is blocked. Some portions of Loop 375 are completed; the El Paso Regional Mobility Authority is collaborating with TxDOT to secure additional funding to complete other portions of this project. Another proposed I-10 alternative is the Northeast Parkway, a 21-mile stretch of highway to connect El Paso's Loop 375 with Highway 404 in New Mexico, thereby mitigating congestion at the border between the two states.²⁴

The region is home to seven of the state's 26 border crossings between Texas and Mexico.

Tech₂O Center

The Carlos M. Ramirez Tech₂O Water Resources Learning Center was developed as an educational and training facility for the city of El Paso and surrounding communities. The center, adjacent to the Kay Bailey Hutchison Desalination Plant, houses 16 water management exhibits designed and sponsored by El Paso Water Utilities to help consumers understand their water usage, and to serve EPWU as an excellent tool for communicating with the public.

The center features an exhibit hall, auditorium, amphitheater and two classrooms. The exhibit hall contains water management displays. Both the amphitheater and the auditorium can hold up to 250 people. The amphitheater is an outdoor setting for presentations and gatherings, while the auditorium functions as a meeting spot for teleconferences, lessons and other presentations.

Each classroom accommodates 50 people and can be used for demonstrations, hands-on training and school field trips. The center also contains outdoor areas including a plaza, wildlife refuge and a xeriscaped region.²⁵ The center's meeting rooms and auditoriums can be used by educators, policymakers, students and the general public to discuss issues concerning the community.²⁶

The Tech₂O Center hosts several different programs through the year, including a Texas Master Naturalist Volunteer Training Program and the International Drinking Water Week. The naturalist training program runs from February through May and trains volunteers in education and outreach about local natural resources.

In 2009, during International Drinking Water Week (May 3-9), the center held an event designed to raise awareness of the current state of drinking water. The event featured exhibits and educational materials produced by local students, with an award ceremony and prizes for the best water conservation poster.²⁷



Yet another proposed corridor that could benefit the region is La Entrada al Pacifico, a highway that would start at the Mexican port town of Topolobampo, cross the border at Presidio, and continue northeast all the way to Midland and Odessa. The original proposed route would run parallel to U.S. Highway 67, cutting through Presidio and Brewster counties; several alternative routes have been discussed as well (**Exhibit 23**).²⁸

The intent of the corridor is to increase traffic passing through currently under used ports of entry, such as the border crossing at Presidio, thus relieving traffic congestion at border crossings in El Paso.

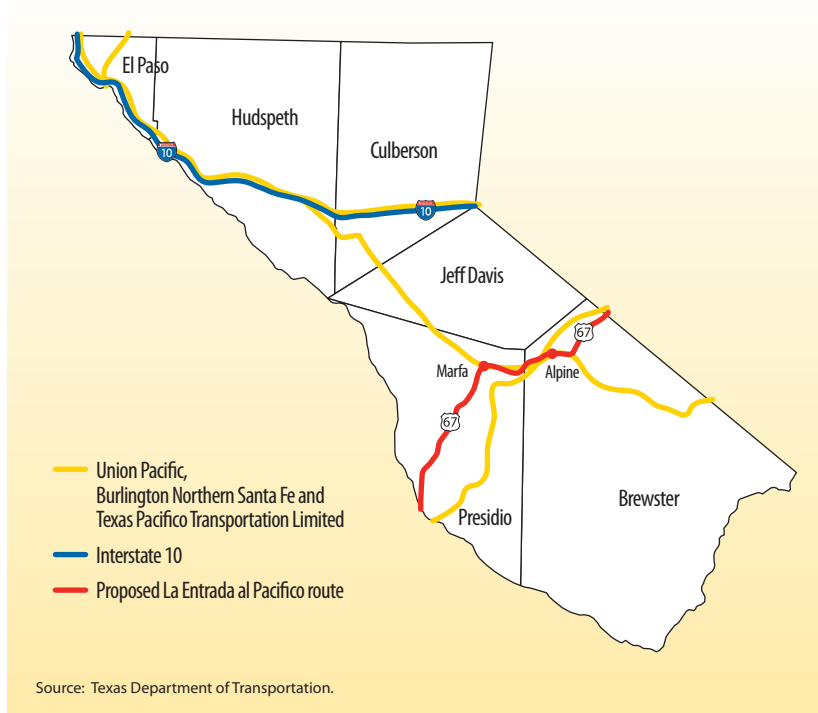
TxDOT is conducting a feasibility study of the proposed La Entrada al Pacifico route and its impact on traffic flows at the Texas-Mexico border. In February 2008, TxDOT released

preliminary results forecasting the number of freight trucks that would come through Presidio as a result of La Entrada construction; the study projects that by 2030, the point of entry would receive between 186 and 587 additional trucks per day, depending on when Mexican portions of the highway are completed.²⁹

TxDOT has conducted public meetings to collect input from local stakeholders in affected regions. Although its study is not yet complete, there is evidence that La Entrada al Pacifico could significantly improve traffic conditions at the El Paso-Juarez border crossings. A corridor study conducted by transportation authorities in Mexico indicated that La Entrada would cause significant improvement in trip mileage and travel times, with commuters going from Chihuahua to Dallas saving 134 miles or six hours of combined drive time and border crossing wait time.³⁰

Exhibit 23

Upper Rio Grande Region Trade Corridors and Rail Lines



Source: Texas Department of Transportation.

Railways

Three railroad companies operate in the Upper Rio Grande region. Two are Class I railroads (classified as such for their large annual operating revenues), the Burlington Northern Santa Fe Company and the Union Pacific Railroad Company. Union Pacific has a more significant presence in the region, with lines running through all six counties. Burlington Northern has one line running parallel to I-10 through El Paso County (**Exhibit 23**).

A third railroad company, Texas Pacifico Transportation Ltd., operates a line that runs southwest through Brewster and Presidio counties to the Mexico border. In addition, the Amtrak Sunset Limited passenger train services the region, with stops in Alpine and El Paso (see sidebar).³¹



Sunset Limited

Amtrak's Sunset Limited is one of the nation's oldest passenger trains still operating under its original name. Though the Sunset Limited's history dates back to the late 1800s, its route through Texas remains virtually unchanged. The train offers a nostalgic option for travelers in the Upper Rio Grande region, taking passengers back to a time when train travel was the preferred mode of transportation. Amenities include a separate dining car as well as sleeper cars and a lounge car dedicated to sightseeing.

The train's full route extends from New Orleans all the way to Los Angeles, for a total of 1,995 miles. In the Upper Rio Grande region, the train makes a stop in Alpine and another in El Paso. The Sunset Limited operates on rail lines once owned by Southern Pacific, which also owned the train itself. The lines now belong to Union Pacific. In 1993, Amtrak began providing Sunset Limited service as far east as Florida; after Hurricane Katrina in 2005, rail service east of New Orleans was put on hold.³²

Amtrak offers rides on the Sunset Limited as part of its larger Texas Eagle route, which makes stops in several Texas cities and runs all the way to Chicago.³³ The Sunset Limited operates three days a week. A one-way ticket from Houston to Alpine costs \$91. Tickets for sleeping arrangements range from \$160 to \$297 but include meals and other amenities. Passengers can choose from cozy but simple "roomettes" to bedrooms with private bathrooms.³⁴

Passengers on the Sunset Limited are treated to views of the Rio Grande River and stunning desert bluffs and canyons. Many passengers use the Sunset Limited to reach final destinations in Arizona and California, while others enjoy stops at West Texas towns such as Alpine and El Paso.³⁵ In fiscal 2008, the Sunset Limited had 13,124 boardings and disembarkings in the Upper Rio Grande region alone, with 9,605 in El Paso and 3,519 in Alpine. Amtrak boardings and disembarkings in all of Texas totaled 323,210 for the same year.³⁶

Public Transportation

The city of El Paso is by far the region's largest urban area. Sun Metro is the city's mass transit department. Sun Metro began operating a new bus rapid transit system in March 2009.³⁷ Aside from El Paso, most of the region is rural; citizens in rural areas of El Paso County can use El Paso County Rural Transit.³⁸

Airports

The Upper Rio Grande region contains one commercial airport in El Paso and six non-commercial airports.³⁹ El Paso International Airport, the region's sole commercial airport, reported 1.67 million boardings in 2007, about 1 percent more than in 2006. Eight commercial airlines provide service to El Paso International — American Airlines, US

Airways, Continental Airlines, Delta, Frontier, Southwest, United and New Mexico Airlines.

In addition to traditional air transportation services, El Paso International owns an industrial park and a cargo center, both located next to the airport. Industrial businesses use the park's 900-acre space for transportation infrastructure operations, and commercial businesses use portions of the property as well.⁴⁰

Parks and Recreation

The rugged mountains and desert plains of the Upper Rio Grande contain more public parkland than any other region in Texas, providing ample recreational opportunities to the public. The region features five units of the National Park Service — Big Bend National Park in Brewster County, Guadalupe



Foreign Trade Zone #68 (El Paso International Airport)

The El Paso International Airport is vital to the region's economic health, serving as a major transportation hub and trade center.

The airport's foreign trade zone (FTZ), granted to the city of El Paso and operated by the airport, consists of 21 industrial sites and has been ranked as one of the nation's top five FTZs in terms of economic activity for the last five years.⁴¹ It currently supports 70 firms that handle items from more than 80 countries.⁴²

Foreign trade zones are designed to help U.S. firms compete against foreign competition in the global marketplace. Duty-free treatment is applied to products entering the zone, and the duty may be applied only after the product has left the FTZ and is purchased within the U.S. market. The product is also not subject to formal Customs entry procedures, quotas and federal excise taxes.

This designation is designed to offset the benefit derived from foreign firms that have similar advantages in their home countries. Most FTZs are located at U.S. ports of entry. Many U.S. firms use El Paso's zone to assemble merchandise, thereby enhancing and adding value to their products under duty-free status.⁴³

Mountains National Park in Culberson County, the Fort Davis National Historic Site in Jeff Davis County and Chamizal National Memorial in El Paso County, as well as the Rio Grande Wild and Scenic River. A national park unit can be either a congressionally-designated national park or another designated area such as a national monument, national seashore, national historic site or national recreation area.

In addition, the region also hosts several state parks, including Big Bend Ranch State Park and Fort Leaton in Presidio County, the Barton Warnock Environmental Education Center in Brewster County, Franklin Mountains State Park and Hueco Tanks State Historic Site in El Paso County and Davis Mountains State Park and Indian Lodge in Jeff Davis County.⁴⁴

National Parks

Big Bend National Park is one of Texas' most famous natural areas. At 801,163 acres, the park is the largest public area in Texas and the eighth-largest national park in the continental

U.S. In fiscal 2008, Big Bend National Park welcomed more than 362,000 visitors.⁴⁵

Big Bend National Park is often referred to as "three parks in one" because it features three unique environments: the alpine terrain of the Chisos Mountains in the center of the park; the arid climate of the surrounding Chihuahuan Desert; and the river ecosystem of the Rio Grande along the park's southern border with Mexico.⁴⁶ The park has three developed campgrounds, at Rio Grande Village and Castolon along the river and Chisos Basin in the mountains.

In addition, numerous backcountry campsites are available for those seeking even more solitude, with desert sites accessible to those with off-road vehicles and mountain sites available only to backpackers. The park also has a lodge and restaurant located in the Chisos Basin for those who prefer amenities such as a hot shower and a warm meal.

Big Bend's southern border also contains 118 miles of the Rio Grande. This includes 69 miles of the 196-mile stretch of the river running from the Chihuahua/Coahuila

The rugged mountains and desert plains of the Upper Rio Grande contain more public parkland than any other region in Texas, providing ample recreational opportunities to the public.



state line in Mexico to the Terrell/Val Verde county line in Texas. This section was designated a Wild and Scenic River by Congress in 1978.⁴⁷ Big Bend National Park manages the *Rio Grande Wild and Scenic River* as a unit of the National Park system.⁴⁸

The Rio Grande's course through Big Bend is famous for three spectacular canyons, Santa Elena, Mariscal and Boquillas. Several outdoor outfitters serve visitors to the Big Bend region. Most of these companies are located in nearby Terlingua and Lajitas. They offer activities such as mountain bike rentals, guided rafting trips, shuttle service for backcountry hiking and four-wheel-drive jeep tours.⁴⁹

Situated along the Texas-New Mexico state line in Culberson County, *Guadalupe Mountains National Park* boasts a mountainous environment that has more in common with the lower Rocky Mountains of New Mexico than with the rest of Texas. The park is home to Guadalupe Peak, which at approximately 8,750 feet is the highest point in the state. In fiscal 2008, Guadalupe Mountains National Park had 163,709 visitors.⁵⁰

Guadalupe Mountains National Park has more than 80 miles of hiking trails that cut through its remote wilderness, including some of the nation's most challenging trails.⁵¹ The trail that scales Guadalupe Peak gains a staggering 3,000 vertical feet in just over four miles and provides access not only to the highest point in the state but also the state's highest camp site. Another popular route passes through beautiful McKittrick Canyon alongside a spring-fed mountain creek. This scenic yet strenuous trail is especially popular in the fall when the leaves of its big-tooth maples change colors.⁵²

Fort Davis National Historic Site in Jeff Davis County offers both attractive scenery and a history lesson on the Western frontier. From 1854 to 1891, troops stationed at Fort Davis protected settlers from Apaches and Comanches. Now the site is a living monument telling the story of this dramatic period. The site has a visitor center and five other restored buildings, as well as dozens of ruins dating from the fort's time as a federal outpost.⁵³ In fiscal 2008, Fort Davis National Historic Site had 49,290 visitors.⁵⁴

Chamizal National Memorial in El Paso commemorates a 1963 treaty between the United States and Mexico that settled a border dispute between the two countries. The memorial is adjacent to the El Paso-Juarez port of entry. Chamizal National Memorial regularly offers art exhibits, cultural demonstrations and educational programs and also contains a bookstore featuring items unique to the El Paso-Juarez region.⁵⁵ In fiscal 2007, Chamizal National Memorial had 197,767 visitors.

Exhibit 24 summarizes the economic impact of the Upper Rio Grande's national parks.⁵⁶

State Parks

In southern Presidio County, the 301,319-acre *Big Bend Ranch State Park* encompasses the Bofecillos mountain range and 23 miles of frontage along the Rio Grande. Added to Texas state parks system in 1988, this massive park makes up more than half of the state's park land.⁵⁷ Big Bend Ranch State Park had 3,181 visitors in fiscal 2008.⁵⁸

Big Bend Ranch is a distinctive natural resource, and the Texas Parks and Wildlife Department (TPWD) has adopted a unique management style to allow for visitors'

Guadalupe Mountains National Park is home to Guadalupe Peak, which at approximately 8,750 feet is the highest point in the state.



Exhibit 24

Economic Impact of National Parks, Upper Rio Grande Region

Name	Number of Visitors 2008	2007 Total Economic Impact on Sales	2007 Spending by Visitors
Big Bend National Park	362,512	\$8,220,000	\$16,040,000
Guadalupe Mountains National Park	163,709	7,380,000	12,530,000
Fort Davis National Historic Site	49,290	1,060,000	2,100,000
Chamizal National Memorial	197,767	11,210,000	16,550,000
Rio Grande Wild and Scenic River	1,606	90,000	180,000

Sources: U.S. National Parks Service and Michigan State University.

Visitors can drive the “River Road” (FM 170), one of Texas’ most scenic highways, which hugs the Rio Grande between Presidio and Lajitas.

maximum enjoyment, including 44 miles of trails for four-wheel drive vehicles. Activities include horseback riding, mountain biking, river rafting, hiking, camping and bird watching. The park’s Saucedo Headquarters provides accommodations for visitors at a group bunkhouse and at the “Big House,” a remodeled ranch house built in 1908.

The park has more than 200 miles of hiking trails, some passing by isolated desert springs that provide oases for overnight backpackers. The park also has several miles of primitive roads that offer access to isolated backcountry campsites. Visitors can also drive the “River Road” (FM 170), one of Texas’ most scenic highways, which hugs the Rio Grande between Presidio and Lajitas.⁵⁹

Situated in Terlingua, between Big Bend National Park and Big Bend Ranch State Park, the *Barton Warnock Environmental Education Center* is a 100-acre facility that offers archaeological, historical and geological information about the region. Visitors can purchase backpacking and river use permits for Big Bend Ranch State Park and learn about the region from park staff. The 80-seat auditorium hosts educational events, while a recently opened Interpretive Center provides

information about both the Mexican and U.S. sides of the Rio Grande. The center also has a bookstore and gift shop featuring maps, guides and books about the Big Bend region, as well as postcards and souvenirs.⁶⁰

Fort Leaton State Historic Site, just west of Big Bend Ranch in Presidio, features historic ruins from an adobe trading post established in 1848. The site is a day-use park with picnic areas, and offers guided tours and historical exhibits about the Border region. In fiscal 2008, Fort Leaton had 3,538 visitors.⁶¹

Near the town of Fort Davis and adjacent to Fort Davis National Historic Site, the 2,709-acre *Davis Mountains State Park* offers beautiful views of the Davis Mountains, the largest range in Texas. McDonald Observatory (see sidebar) and Mount Livermore (Texas’ fifth-highest peak) are both visible from the park’s Skyline Drive, where nighttime stargazing is a popular activity. Also within the park are the Black Bear Restaurant and Indian Lodge, a recently remodeled adobe-style hotel built by the Civilian Conservation Corps in the 1930s.⁶² In fiscal 2008, Davis Mountains State Park had 62,640 visitors.⁶³

Franklin Mountains State Park is entirely within the city limits of El Paso. At 24,247



Wyler Aerial Tramway

The Wyler Aerial Tramway in the eastern part of Franklin Mountains spans nearly 200 acres of mountain and rock formations.⁶⁴ The tramway was developed by Karl O. Wyler, owner and founder of KTSM-TV and radio. Construction of the tramway began in January 1959 and was completed the following year. While open to the public, it was initially constructed in part so that workers could service TV and radio antennas located at the top of Ranger Peak, near El Paso. In 1997, Wyler donated the tramway to the state and in 2000, after renovations, it was once again opened to the public.⁶⁵

The tramway’s aerial cable car offers magnificent views from the top of Ranger Peak. It travels up a 2,600-foot-long steel cable; visitors can see how the gondola works through an opening on the south side of the base station. While on the gondola, a cabin attendant describes the various cacti and rock formations seen as they pass by. The ride takes about four minutes.

Once visitors reach Ranger Peak, visitors can view 7,000 square miles of Mexico, New Mexico and the city of El Paso. The station at the top has an observation deck with a panoramic view.⁶⁶

acres, the park holds the distinction of being the entirely largest urban park in the nation. Franklin Mountains State Park is a popular destination for camping, hiking and mountain biking. It also features the Wyler Ariel Tramway (see sidebar).⁶⁷ In fiscal 2008, Franklin Mountains State Park had 28,131 visitors.⁶⁸

Thirty-two miles east of El Paso, Hueco Tanks State Historic Site features ancient pictographs from native peoples who were attracted to the region by the presence of water that pooled in natural stone basins in the

Hueco Mountains. Hueco Tanks is also widely recognized as one of the best sites in the world for “bouldering,” a challenging variation of mountain climbing done without safety ropes. TPWD strives to balance recreational use with historic preservation at the 860-acre park, and access to parts of the park requires a guide. Reservations are recommended for those interested in visiting or climbing.⁶⁹ In fiscal 2008, Hueco Tanks State Historic Site had 28,892 visitors.⁷⁰

Exhibit 25 summarizes the economic impact of the Upper Rio Grande Region’s state parks.

Exhibit 25

Economic Impact of State Parks, Historic Sites and Attractions, Upper Rio Grande Region

Name	Number of Visitors 2008	2006 Total Economic Impact on Sales	2006 Spending by Visitors
Big Bend Ranch State Park	3,181	n/a	n/a
Barton Warnock Environmental Education Center	16,193	n/a	n/a
Fort Leaton State Historic Site	3,538	n/a	n/a
Franklin Mountains State Park	28,131	n/a	n/a
Wyler Aerial Tramway	31,148	\$730,000	\$20,000
Hueco Tanks State Historic Site	28,892	580,000	110,000
Davis Mountains State Park	62,640	2,180,000	1,530,000
Indian Lodge	65,545	3,700,000	2,000,000

Note: Economic data was not available for Big Bend Ranch, Fort Leaton, and Franklin Mountains. Sources: Texas A&M University and Texas Parks and Wildlife Department.



The area has high potential for the development of solar and geothermal energy.

Fishing and Hunting

Due to the region’s largely desert character, fishing opportunities in the Upper Rio Grande region are limited. Big Bend Ranch State Park allows free fishing on the banks of the Rio Grande, primarily for catfish.⁷¹

Every county in the region offers some sort of legal hunting, with variations in permit requirements for antlerless deer, bag limits for deer and squirrels and the availability of turkey hunting.

In 2007, hunting and fishing enthusiasts in the Upper Rio Grande region purchased more than 14,000 licenses from the Texas Parks and Wildlife Department, at a cost of more than \$311,000. All revenue collected from the sale of hunting and fishing licenses

goes to a dedicated state fund supporting the protection, regulation and conservation of the state’s fish and wildlife.⁷²

Energy

In earlier epochs of the earth’s history, volcanoes covered much of what is now the Upper Rio Grande region. This activity was in part responsible for the area’s mountains and its wide variety of mineral deposits, including silver, mercury, copper and zinc.

Later, shallow seas encroached, but little of the area was submerged long enough for carboniferous life forms to settle on the sea floor — and ultimately develop into oil and gas deposits such as those found to the region’s east in the Permian Basin.⁷³ On the

Exhibit 26

Bag Limits and Other Applicable Hunting Regulations, Upper Rio Grande Region, 2008-09

Animal	Season
White-tailed Deer	Brewster, Culberson, Jeff Davis and Presidio counties allow white-tailed deer hunting. Open season lasts from November 1 until January 4. The bag limit is four deer and no more than two bucks. Archery season lasts from September 27 until October 31. Antlerless deer may be hunted without a permit unless TPWD has issued antlerless managed land deer permits to help control the deer population. Muzzleloader-only season is from the first Saturday following the closing of the general open season for nine consecutive days. A special youth-only season occurs twice a year, on October 25 and 26 and January 17 and 18.
Mule Deer	General season: November 29 – December 14, with a two deer bag limit (limit one buck). Archery only season: September 27 – October 31, with a two deer bag limit (limit one buck).
Javelina	No closed season and a bag limit of two per license year.
Squirrel	No closed season.
Turkey	Jeff Davis and Brewster County allow hunting of the Rio Grande turkey, with a bag limit of four. The season is from March 21 – May 3, 2009 (gobblers only). Special youth-only season: March 14 – 15 and May 9 – 10.
Pronghorn	Jeff Davis, Brewster, Presidio, Culberson and Hudspeth allow pronghorn hunting by permit only from October 4 – 12.
Quail	October 25 – February 22. Daily bag limit: 15; possession limit: 45.
Dove	Central Zone (South of I-10): September 1 – October 30 and December 26 – January 13 with no limit. North Zone (North of I-10): September 1 – October 30.

Source: Texas Parks and Wildlife Department.



other hand, the area has high potential for the development of solar and geothermal energy.

Oil and Gas

Culberson County is the only one of the region's six counties that produces oil and gas, with 23 natural gas wells and 82 oil wells operating as of February 2009.⁷⁴ The natural gas is produced from the Barnett Shale, the same formation that produces large quantities of natural gas in the Fort Worth area, although in Culberson County the Barnett Shale gas is found at a greater depth, making it more difficult and more expensive to produce.⁷⁵

One of the region's largest landowners is the University of Texas System. In the nineteenth century, the Texas Legislature dedicated millions of acres of West Texas lands, including some in El Paso, Culberson and Hudspeth counties, to the Permanent University Fund for the financial support of a state university.

University lands in Hudspeth and especially Culberson counties have produced some natural gas in years past; current leaseholders, however, are paying "shut-in royalties" to keep their leases active.⁷⁶ These royalties are producer payments to the landowner in lieu of actual production for non-producing wells. Wells may be shut in due to inadequate prices or infrastructure.⁷⁷

Other Minerals

Several mines have operated in the Upper Rio Grande area, some dating back to the 1880s, producing a wide variety of minerals including cinnabar (mercury ore), copper, tin, lead, zinc, molybdenum, bentonite (a type of clay), sulphur, talc, marble, gypsum, stone, sand, gravel,

silver, feldspar and zeolite (a mineral useful for removing odors, toxins and chemicals).⁷⁸

Copper minerals once were mined throughout Culberson and Hudspeth counties, although none are operating today. The largest mine was the Hazel copper and silver mine in Culberson County. From 1891 to 1947, the Hazel mine produced more than one million pounds of copper.⁷⁹

Electricity

About 97 percent of the region's population receives electricity from the Western Electric Coordinating Council (WECC).⁸⁰ The council, one of eight "reliability councils" in the U.S. that manage electricity flows, serves El Paso County and parts of nearby counties (**Exhibit 27**). WECC serves

About 97 percent of the region's population receives electricity from the Western Electric Coordinating Council.

Exhibit 27

Areas in the ERCOT and WECC Electric Grids

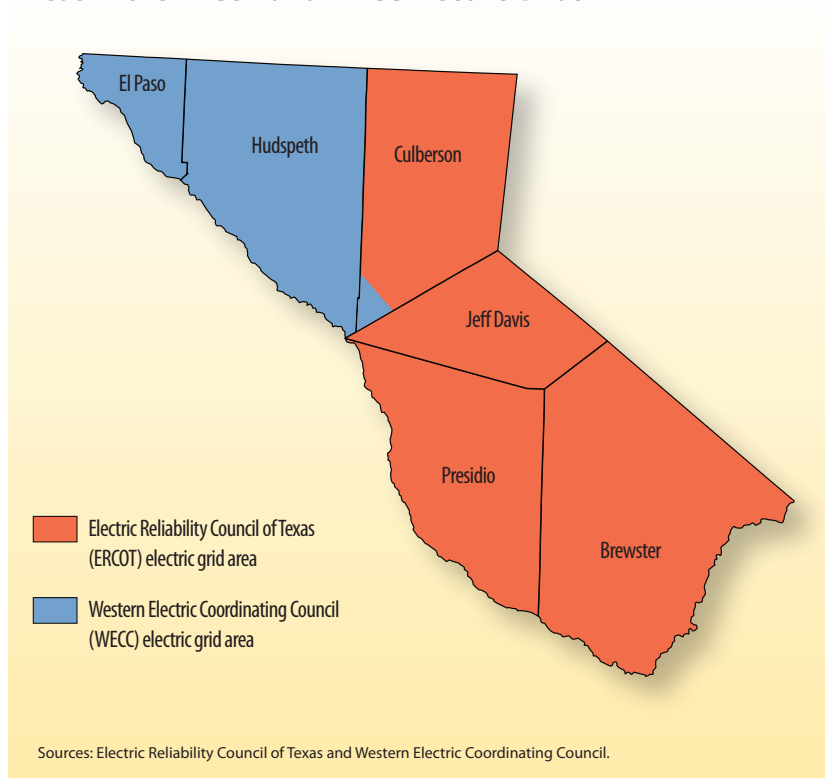




Exhibit 28

Percentage of Electricity Generated by Fuel Type, ERCOT and WECC, 2008

Fuel Source	ERCOT	WECC
Natural Gas	43%	42%
Coal	37	18
Nuclear	13	5
Wind	5	1
Hydroelectric/ Other	2	34
Total	100%	100%

Note: Fuel source percentages are rounded. For WECC "Natural Gas" includes "dual fuel" generation.
Sources: Electric Reliability Council of Texas and Western Electricity Coordinating Council.

The largest electric utility is the El Paso Electric Company, an investor-owned utility serving 361,000 customers in the Upper Rio Grande region of Texas and New Mexico.

all or most of Arizona, New Mexico, Colorado, Nevada, Wyoming and South Dakota.⁸¹

Most of the region's land area, however, lies within the jurisdiction of the Electric Reliability Council of Texas (ERCOT). ERCOT is the only U.S. reliability council located entirely within the boundaries of a single state; it covers 75 percent of Texas' land area and administers 85 percent of the state's electric load, serving some 21 million customers.⁸²

Exhibit 29 lists the electric providers that serve the Upper Rio Grande Region. The largest electric utility is the El Paso Electric Company, an investor-owned utility serving 361,000 customers in the Upper Rio Grande region of Texas and New Mexico.⁸³

Wind Energy

Culberson County is home to two wind farms, the Wind Power Partners '94 farm and Delaware Mountain, with a combined total of 147 turbines capable of producing about 68 megawatts (MW) of electricity — enough to power about 15,640 average Texas homes.⁸⁴

American National Wind Power operates the 30 MW Delaware Mountain wind farm, installed in 1999 on a ranch near Van Horn. Customers purchasing power from this facility include the Lower Colorado River Authority (LCRA) in Austin and Reliant Energy in Houston. The LCRA and the state's General Land Office joined private industry partners to develop the almost 35 MW Wind Power Partners project, which began generating electricity in 1995.⁸⁵

Exhibit 29

**Municipally Owned Utilities and Member-Owned Cooperatives
Upper Rio Grande Region**

Entity Name	Service Area
El Paso Electric Company	El Paso County and parts of Hudspeth and Culberson counties
Rio Grande Electric Cooperative	Parts of Hudspeth, Culberson, Jeff Davis, Presidio and Brewster counties
WTU Retail Energy	Parts of Culberson, Jeff Davis, Presidio and Brewster counties
Lower Colorado River Authority	Parts of Culberson County
Oncor	Parts of Culberson County
Texas-New Mexico Power Company	Parts of Culberson County

Source: Public Utility Commission of Texas.



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Health Care

Geography plays a significant role in the ability of Upper Rio Grande residents to obtain health care. The region's major health care service centers all are located in El Paso; persons living in sparsely populated areas may have to drive more than 80 miles to the nearest doctor or hospital. The region also has a high percentage of citizens who lack health insurance.¹

The city of El Paso and El Paso County, however, have worked with local entities, the state and the federal government to develop innovative solutions for these challenges. El

Paso's new Paul L. Foster School of Medicine, for instance, is the result of a partnership between the city of El Paso and Texas Tech University's School of Medicine, and was made possible by state financial aid and private donations.

The Legislature and area universities also have established research programs that study illnesses common along the U.S.-Mexico border. Both for-profit and nonprofit organizations have established new service sites in El Paso, such as the new East Medical Center located in an underserved area of the city, as well as the city's first children's hospital currently under construction.

Health Care Infrastructure

Medical facilities anchor any health care infrastructure. They provide a central point

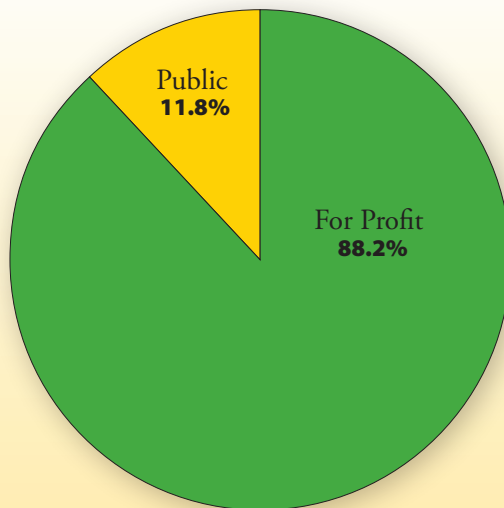


Ground breaking ceremonies at the new El Paso Children's Hospital

PHOTO: Jethro Armijo, Thomason Hospital



Exhibit 30

Upper Rio Grande Hospital Ownership, 2008

Source: Texas Department of State Health Services.

for advanced medical services; encourage the growth of affiliated medical services in surrounding areas; and often are major employers. Five of El Paso's 14 largest employers are health-related organizations. Of these five, four are hospitals and one is a nursing association that provides home health care for patients.²

The Upper Rio Grande region has 15 for-profit hospitals and two public hospitals (**Exhibit 30**). El Paso accounts for 15 of these, including two public hospitals — R.E.

Thomason General Hospital and El Paso Psychiatric Center — and 13 for-profit hospitals, while Brewster and Culberson counties each have one for-profit hospital.

Providence Memorial Hospital in El Paso is the region's largest, with 508 beds, and one of its largest employers. Sierra Medical Center and Del Sol Medical Center are the next-largest. In 2008, the region's hospitals had a total of 2,377 staffed beds. Together, Culberson County Hospital and Big Bend Regional Medical Center in Brewster County accounted for only 39 of these beds.³

The Rio Grande region also has three hospital districts (**Exhibit 31**).⁴ These districts are authorized to levy taxes within their jurisdictions for the support of health care and hospital services. In 1991, Brewster County Hospital District and Presidio County Hospital District combined to create the Big Bend Regional Hospital District. Taxes levied from both counties support the district.⁵

In addition, the Texas Tech University Health Sciences Center maintains clinics in East, West, Central and Northeast El Paso. Texas Tech El Paso faculty members work through community partnerships to provide underserved areas in El Paso with health care.⁶

Three of the region's six counties do not have a hospital (**Exhibit 32 – page 71**).⁷ Their residents must travel relatively long distances to reach hospitals, which can be critical in emergency situations. Even in Brewster and Culberson counties, some residents still must drive long distances for emergency care. For example, while Marathon has a health clinic with a doctor and nurse that is open on Mondays and Thursdays, the closest hospital is Big Bend Regional in Alpine which is 32 miles away.⁸

Exhibit 31

Upper Rio Grande Region Hospital Districts

Culberson County Hospital District

R. E. Thomason General Hospital District

Big Bend Regional Hospital District

Source: Texas Department of State Health Services.



Major Health Care Projects

Several El Paso medical institutions and Culberson County's hospital have plans for expansion. While the El Paso projects are proceeding, the current economic downturn has delayed the Culberson Hospital expansion.

Texas' first new medical school since 1977, the Paul L. Foster School of Medicine, is being built in El Paso.⁹ The school is scheduled to start classes on July 13, 2009, and should increase economic activity within the region. One study estimates that the school will add \$1.3 billion in local business revenue, \$462 million in household income and \$12 million in local revenues over the next ten years. The school is also expected to generate about 4,700 new jobs in the region.¹⁰ Upon completion of the medical school, this historically underserved region will see an increase in its supply of medical professionals and well-paid professional jobs.¹¹

The long-awaited construction of the El Paso Children's Hospital began in February 2009. The project has a budget of \$119 million and should be completed in early 2012. The 224,500-square-foot children's hospital will feature pediatric operating rooms and 60 private rooms.¹²

El Paso's R. E. Thomason General Hospital is completing several health facility construction and expansion projects at a cost of more than \$250 million. In 2008, construction began on the hospital's Master Plan Implementation project, which is expected to cost \$139 million by its completion in late 2011.¹³ The project includes the expansion and renovation of a 345,500-square-foot Bed Tower (a building primarily for patient rooms) and a Level I Trauma Emergency Department. A Level I trauma center has the specialists and training available 24 hours a day, seven days a week to handle all trauma cases.¹⁴

(text continued on Page 69)

Texas' first new medical school since 1977, the Paul L. Foster School of Medicine, is being built in El Paso.

The Paul L. Foster School of Medicine

The Texas Tech University Health Sciences Center's (TTUHSC's) Paul L. Foster School of Medicine in El Paso will begin classes on July 9, 2009. This inaugural class of 40 students was selected from a pool of 2,500 applicants.¹⁵

Texas Tech began work on establishing a medical school in El Paso in 1999.¹⁶ Its efforts bore fruit when the 2007 Legislature appropriated startup funds for the school.¹⁷

The Liaison Committee on Medical Education, the national medical school standards agency, has fully accredited the Paul L. Foster School.¹⁸ Its campus has taken shape with the construction of a 93,000-square-foot El Paso Medical Science Building devoted to research as well as a 125,000-square-foot classroom building.¹⁹ The school plans to increase its enrollment annually, accepting 60 students in 2010 and 80 students in 2011. By 2013, the medical school is expected to add \$1.3 billion to the local economy.²⁰

According to Dr. Manuel Schydlower, the school's associate academic dean for admissions and professor of pediatrics, a major objective of the Foster School of Medicine is to increase the number of doctors in El Paso and the Upper Rio Grande region. At present, El Paso has fewer than 110 physicians for every 100,000 residents, compared to an average of 150 per 100,000 residents in Texas as a whole and 198 per 100,000 in the U.S.

Dr. Schydlower also says that a number of students from the area will be in the first medical school class. Five of the 40 students admitted into the first class are coming from the University of Texas at El Paso pre-med program.²¹



Thomason Hospital/University Medical Center of El Paso

In March 2008, Thomson Reuters Healthcare selected El Paso's R.E. Thomason General Hospital as one of America's Top 100 hospitals, based on its national evaluation of best practices. This was Thomason's third time to receive this honor.

The hospital was selected from a total pool of 3,018 institutions and was one of just seven Texas hospitals to make this select list; no other hospital in El Paso has ever received this award. It recognizes hospitals that have achieved the highest standards in patient treatment and outcomes; their ability to attract more patients; operational efficiency; and financial performance.²²

A week later, INGENIX, a major medical information corporation, named Thomason as the fourth highest-rated major teaching hospital in America for the accuracy of its medical coding. After patients are discharged from the hospital, their medical records are sent to Thomason staff, which assigns codes that determine how insurers, including Medicare and Medicaid, will pay for services. The accuracy of such coding is essential for effective operations.²³

Thomason is El Paso's only nonprofit, acute-care teaching hospital that provides health care to all El Paso County residents regardless of their ability to pay.²⁴ In fiscal 2007, Thomason received about \$55 million from El Paso taxpayers, but provided more than \$100 million in care to the uninsured and working poor. More than 30 percent of its patients, furthermore, are covered by Medicaid or Medicare, which pay less than private insurers.²⁵

Thomason Hospital also has extended coverage to thousands of previously uninsured area residents through its participation in El Paso's First Health Plans Inc., a community nonprofit health maintenance organization. El Paso First has contracted with the Texas Health & Human Services Commission to provide health care for recipients of aid from State of Texas Access Reform (STAR) Medicaid, the Children's Health Insurance Program (CHIP) and CHIP Perinatal.²⁶ (The State of Texas has selected certain counties to have a Medicaid managed care program through STAR).²⁷ The CHIP perinatal coverage provides medical care for the unborn children of low-income women who do not qualify for Medicaid.²⁸

Thomason is affiliated with all of the region's health-related educational institutions. Since 1973, Texas Tech University Health Science Center at El Paso has partnered with Thomason to provide medical training at the hospital. The University of Texas at El Paso, El Paso Community College, New Mexico State University, Sul Ross State University, Angelo State University and El Paso's area magnet high schools also use Thomason as a clinical training facility for nurses, therapists, technicians and many other medical professions.²⁹

The state of Texas and the American College of Surgeons have designated Thomason as the only 24-hour Level I Trauma Center within a 250-mile radius. Air ambulances transport patients to the center, which serves more than 61,800 patients each year.³⁰

Thomason Hospital soon will change its name to the University Medical Center of El Paso. The new name reflects Thomason's evolution into a large medical complex including not only the Thomason Pavilion (the hospital itself), but also a Children's Hospital and the new Paul L. Foster School of Medicine.³¹



Thomason Hospital is also expanding its Northeast Clinic, adjacent to the Texas Tech Family Practice building. The new 28,447-square-foot building is estimated to cost \$12.3 million and officially opened its doors on May 29, 2009. The new building will house an orthopedic clinic, laboratory and outpatient pharmacy, and will provide X-ray and CAT scan imaging and outpatient rehabilitative services.³²

In May 2008, the Sierra Providence Health Network opened its East Medical Center in an underserved area on El Paso's East Side. The new 110-bed center was completed in three years at a cost of \$140 million. It is equipped with a 20-bed emergency services center, a 12-bed intensive care unit and an emergency helipad.³³

As noted above, Culberson County Hospital plans to expand and renovate its building. The new construction would add patient rooms, an emergency room and imaging facilities. At this writing, however, only \$700,000 of the \$7.5 million in bonds needed to finance the project have been sold.³⁴

Veterans' Health Care

The El Paso Veterans' Affairs Health Care System (VAHCS) offers specialized and primary outpatient medical services to veterans in El Paso, nearby Texas counties and Doña Ana County, New Mexico. The El Paso VAHCS opened in October 1995 and consists of a four-story building of about 250,000 square feet. In June 2008, a 29,000-square-foot East Wing addition opened.³⁵

The main health care center is located next to William Beaumont Army Medical Center (WBAMC) on Fort Bliss, with a Community

Based Outpatient Clinic (CBOC) in Las Cruces, New Mexico. (CBOCs were created in 1995 by the U.S. Veterans Health Administration to augment the delivery of primary medical care to veterans.)³⁶

The main health care center offers primary and specialized outpatient services. Consultants and specialists are available to supplement its medical staff. VAHCS has an eight-room outpatient surgical suite and conducts residency programs in internal medicine and psychiatry with Texas Tech University and WBAMC.³⁷

El Paso also has a Veterans' Affairs Health Center that provides counseling services for veterans returning from overseas deployment. These services focus on smoothing the transition from military to civilian life. Various services offered include individual counseling, marital and family counseling, medical referrals and employment counseling. Since 2003, the Vet Center is also authorized to provide bereavement counseling services to parents, spouses, children and siblings of service members who die while on active duty.³⁸ The center is available to veterans living in the Upper Rio Grande region.³⁹

Psychiatric Care

The region's psychiatric services are coordinated by two entities: the El Paso Community Mental Health and Mental Retardation (MHMR) Center, serving El Paso County; and the Permian Basin MHMR Center, serving Brewster, Culberson, Hudspeth, Jeff Davis and Presidio counties. Both offer inpatient as well as outpatient services for residents of far West Texas.⁴⁰

In addition, the El Paso area has many small mental health providers that provide

The El Paso Veterans' Affairs Health Care System offers specialized and primary outpatient medical services to veterans.



area residents with services, generally on an outpatient basis. These providers rely on the community's two large nonprofit public mental health providers, El Paso Community MHMR and the El Paso Psychiatric Center (EPPC), to receive referrals and provide more intensive services.⁴¹

The El Paso Community MHMR Center offers outpatient adult psychiatric services through treatment teams at three sites around the city. Each team includes multiple mental health professionals who provide services including medication, family education and individual and group counseling.⁴²

El Paso MHMR also provides mental health services for children and adolescents aged three to 17 who suffer from a variety of emotional disturbances through its Children Adolescent Mental Health Programs (ChAMHPs). The ChAMHPs provide crisis management, screenings and mental health referrals; case management; intensive family counseling; early childhood intervention; medications; and community/family support services through interdisciplinary treatment teams.⁴³

In-patient psychiatric services in the El Paso area are provided by the Texas Department of State Health Services' (DSHS') El Paso Psychiatric Center. EPPC is a 74-bed inpatient psychiatric hospital serving both adults and children. The adult services program consists of one acute admission unit, one sub-acute care unit and one specialty unit for long-term care. The child and adolescent services program offers in-patient crisis stabilization services in two separate units, one for children aged five to 12 and the other serving adolescents.⁴⁴

In addition to EPPC, the El Paso area also benefits from Peak Psychiatric Hospital (PPH), located in New Mexico serves the El Paso area. PPH is a private psychiatric hospital with 36 beds specializing in long-term and substance abuse care for children and adolescents. PPH uses an interdisciplinary team of treatment professionals to provide medication; individual, group and family therapy; special educational experiences; and activity therapies involving art, music and recreation.⁴⁵

DSHS' Big Spring State Hospital (BSSH) in Big Spring, Texas provides in-patient psychiatric services for patients living outside of El Paso County. BSSH is a 200-bed psychiatric hospital serving adults living in a 58-county area in West Texas and the Texas South Plains, including Brewster, Culberson, Hudspeth, Jeff Davis and Presidio counties.⁴⁶

The Permian Basin Community Centers (PBCC) for MHMR provides outpatient psychiatric services for Upper Rio Grande residents living in counties other than El Paso County. PBCC offers services to children and adults with psychiatric disabilities, as well as their families, through clinics in Alpine, Van Horn and Presidio. In addition, it operates a 24-hour crisis intervention and suicide prevention hotline. PBCC also provides staffing for face-to-face interventions, including the coordination of emergency hospitalizations.⁴⁷

Community mental health providers indicate that it is proving increasingly difficult to maintain a suitable work force in the region, noting that the expected expansion of Fort Bliss military base will make it even more difficult to ensure both the quality and quantity of client services. Mental health workers believe that a significant increase in capital projects

The El Paso Community MHMR Center offers outpatient adult psychiatric services through treatment teams at three sites around the city.



and operating expenses is needed to address the area's mental health issues effectively.⁴⁸

Professional Shortages and Rural Health Care

The Upper Rio Grande region's shortage of health professionals is a significant problem. In 2009, the U.S. Department of Health and Human Services identified Culberson, Hudspeth, Jeff Davis and Presidio counties as having a shortage of primary care health professionals. Culberson, Hudspeth and Presidio counties also have a shortage in dental professionals, and all of the region's counties are in dire need of mental health practitioners (**Exhibit 32**).⁴⁹

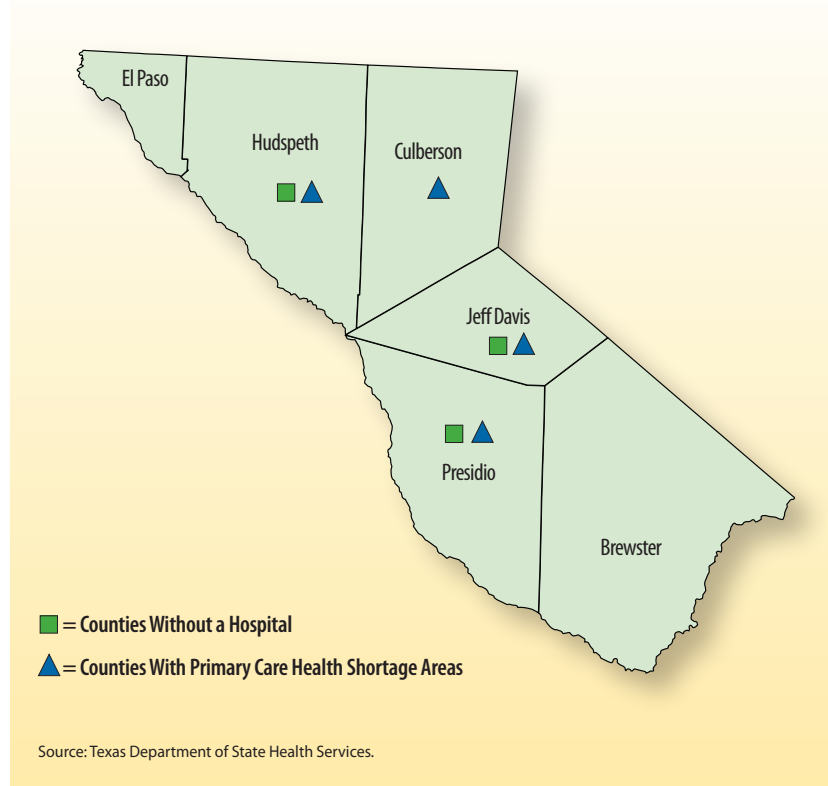
Primary care physicians have a primary specialty of family practice/medicine, general practice, pediatrics, obstetrics/gynecology, internal medicine or geriatrics.⁵⁰ In 2008, Culberson, Jeff Davis and Presidio Counties each had one primary care physician. The physician in each county served populations of 3,274, 2,566 and 8,402, respectively. Hudspeth County suffered from the worst shortage in 2008, as the area had no practicing licensed physicians of any kind.⁵¹

In 2008, El Paso County's 36 licensed psychologists served a population of 755,157, while Brewster County had three psychologists for 9,624 residents. Culberson, Hudspeth, Jeff Davis and Presidio Counties had no licensed psychologists.⁵²

Culberson, Hudspeth and Jeff Davis counties had no dentists in 2008, while Presidio County had only one dentist serving a population of 8,402.⁵³ These shortages of health professionals cause considerable difficulties for the region's residents, often requiring them to travel many miles for medical care.

Exhibit 32

Upper Rio Grande Counties Without a Hospital, 2008 and Primary Care Health Professional Shortage Areas, 2009



For example, residents of Fort Davis in Jeff Davis County must go to Alpine in Brewster County, 25 miles away for dental care.⁵⁴

Promotoras, community health workers who provide a link between health care providers and patients for residents in underserved communities, help to fill the gaps left by the shortage of health professionals.⁵⁵ *Promotoras* work in clinics, hospitals, faith-based organizations, community-based organizations, academic institutions and public health departments.⁵⁶ Their work includes visiting patients in clinics; making home visits to follow up on patient progress after clinical visits; and making presentations at schools to inform students on health care issues.⁵⁷

Promotoras, community health workers who provide a link between health care providers and patients for residents in underserved communities, help to fill the gaps left by the shortage of health professionals.



El Paso Inter-religious Sponsoring Organization

The El Paso Inter-religious Sponsoring Organization (EPISO) has served parts of the Upper Rio Grande region for 27 years. The organization works in several civic arenas including worker training, the provision of water resources and college course enrollment.

EPISO also offers Civic Academies several times each quarter. These are community educational meetings that focus on economic development, immigration and toll roads. The academies help inform community members on practical ways to prevent poverty, combat social ills and in general improve the plight of the working poor. Most recently, an academy was offered on the role of community colleges as a gateway to the middle class.

EPISO has worked as a key player in the ongoing effort to bring water to all residents in *colonias* in the Upper Rio Grande region. When EPISO began work on this project, nearly 70,000 people in the region were without water; today that number is down to about 3,000, and continues to fall. EPISO continues to take an active role in this endeavor and is committed to bringing clean water to all of the region's residents.

EPISO also has partnered with the University of Texas at El Paso and El Paso Community College to provide training in healthcare occupations through the Arriba program. A majority of Arriba participants are single heads of households with one or more children, Hispanic and female, and average around 30 years of age. The program often trains individuals for jobs in the medical field such as nursing, but also offers training in the education and information technology fields.

Arriba participants report earning an average of about \$7,000 per year on entering the program. Upon completion, they become trained professionals who can earn up to \$20 an hour. Participants also receive help with preparing for college enrollment.⁵⁸

The work of the *promotoras* is funded through various sources such as local, state, and federal grants and private funding. The Texas Health and Human Services Commission funds about 24 of the region's *promotoras*. While *promotoras* are active in El Paso County, the region's other counties have no funding to support their work. From time to time, *promotoras* will volunteer to offer unpaid services to those in need in their communities.⁵⁹

Uninsured Residents

For the years 2006 and 2007, an average of 24.8 percent of all Texans lacked health insurance. This was the highest uninsured rate of

any state.⁶⁰ Within Texas, in turn, the Upper Rio Grande region has among the highest rates of uninsured residents. In 2005, more than 29 percent of the residents of all six Upper Rio Grande counties were uninsured. The lowest rate was in El Paso County, with an estimated 29.5 percent of its residents uninsured, while the highest rate was in Hudspeth County, with a 44.2 percent uninsured rate.⁶¹

According to a recent study, El Paso's high uninsured rate accounts for many cross-border purchases of medications and health care obtained in Ciudad Juarez, Mexico. Among adults surveyed for the study, 33 percent had crossed the border to purchase medications



in Mexico, while only 5 percent of Ciudad Juarez residents crossed the border to purchase medications in the U.S. The study's authors attribute these patterns to generally less costly and more accessible health care in Mexico, including the ability to purchase some prescription drugs without a doctor's prescription.⁶²

Uninsured residents of El Paso County typically receive care from a variety of "safety-net" providers including the public hospital (Thomason Hospital), other area hospitals, Texas Tech University Health Sciences Center clinics and community health clinics including Centro de Salud Familiar La Fe, Centro San Vicente family health center and the Project Vida Health Center. El Paso's Thomason Hospital is a major provider of health care to the uninsured. In fiscal 2007, the hospital collected about \$55 million in taxes but provided over \$100 million in charity care.⁶³

Another source of health care for low-income and uninsured people is the community health center (CHC), usually a private, nonprofit entity supported by faith-based organizations, civic leaders and local business owners. These CHCs generally are located in underserved areas, both urban and rural, and provide one-stop health services for low-income families. In addition to primary care and laboratory services, CHC patients also receive preventive care. CHCs also may provide outreach, health education and screening programs as well as other social services tailored to meet the needs of their community.

One of El Paso's oldest CHCs is Centro de Salud Familiar La Fe clinic, which has treated low-income and uninsured children and families since 1967. The clinic got its start when a group of parents living in one

of El Paso's poorest neighborhoods formed the "Ochoa Parents Association," primarily comprising women working in low-wage garment and cannery industry jobs, to tackle the health and social problems affecting their community. From its beginnings as a single-room clinic in a neighborhood house, La Fe now includes several clinics, a Child and Adolescent Wellness Center and a Cultural and Technology Center. La Fe continues to provide much-needed health care for U.S. and Mexico border children and their families in the El Paso area.⁶⁴

Centro San Vicente, founded in 1988, is a nonprofit community-based clinic providing health care services, social services and health education programs to low-income and uninsured individuals in El Paso County. Ninety-one percent of its patients live in poverty and 68 percent are uninsured. In addition to its two health care clinics, the Centro also runs a clinic for homeless children and families.⁶⁵

Project Vida, a community health clinic in El Paso, runs three primary care health clinics that provide care to low-income families as well as other social services designed to improve the health of the poor.⁶⁶

The County Indigent Health Care Program (CIHCP) provides medical services for eligible low-income individuals who do not qualify for other government programs such as the Children's Health Insurance Plan, Medicaid or Medicare.⁶⁷ Program eligibility is based on income, the number of people in a household, financial resources and residence. Where available, CIHCP services are provided through public hospitals and hospital districts.⁶⁸

Another source of health care for low-income and uninsured people is the community health center.



Each of the six counties in the Upper Rio Grande region operates a County Indigent Health Care Program. Several that lack a hospital district or public hospital partner with an adjacent county to provide health care through CIHCP. For example, Big Bend Regional Medical Center in Brewster County runs CIHCP for both Brewster and Presidio counties. Similarly, indigent residents of Presidio County receive health care services at the Big Bend Regional Medical Center in Alpine.⁶⁹ And Hudspeth County residents can go to either Culberson or El Paso County to receive medical services.⁷⁰

In El Paso, CIHCP is offered through the HealthCARE Options program at Thomason, the county's public hospital. This benefit plan is designed primarily for El Paso residents who are at or below 100 percent of the federal poverty level. Those who qualify can receive services such as in-network specialist care, physician office visits and x-rays.⁷¹

Diabetes and Obesity

In 2006, the Upper Rio Grande region had slightly higher adult obesity and diabetes prevalence rates than the Texas average. Obesity is a major risk factor for diabetes, a serious public health problem in the U.S. and Texas.⁷² The prevalence of adult diabetes in Texas is rising rapidly, from 7.7 percent in 2004 to 10.3 percent in 2007.⁷³ Hispanics have a higher prevalence of obesity and diabetes than Anglos. In 2008, 80.9 percent of the Upper Rio Grande region population was of Hispanic origin.⁷⁴ A 2005 study noted that by the late 1990s, three out of four Mexican-American adults were either overweight or obese.⁷⁵ Unsurprisingly, diabetes is more common in

the Upper Rio Grande region than in the state as a whole — 8.1 percent versus 8 percent in 2006.⁷⁶ **Exhibit 33** compares adult diabetes prevalence among Texas' regions.

Untreated or poorly controlled diabetes can lead to long-term health complications including heart disease, stroke, vascular disease, blindness, kidney disease, nerve damage and amputation. Diabetes was the sixth-leading cause of death in Texas from 2002 through 2005.⁷⁷ A U.S.-Mexico Border Diabetes Prevention and Control Project found that diabetes was the fourth-most common cause of death among Texas Hispanics in 2002, and the fifth-most common in El Paso.⁷⁸ Mortality from diabetes, furthermore, is probably higher than indicated in statistics, since it is often listed as a contributing factor rather than a cause of death.⁷⁹

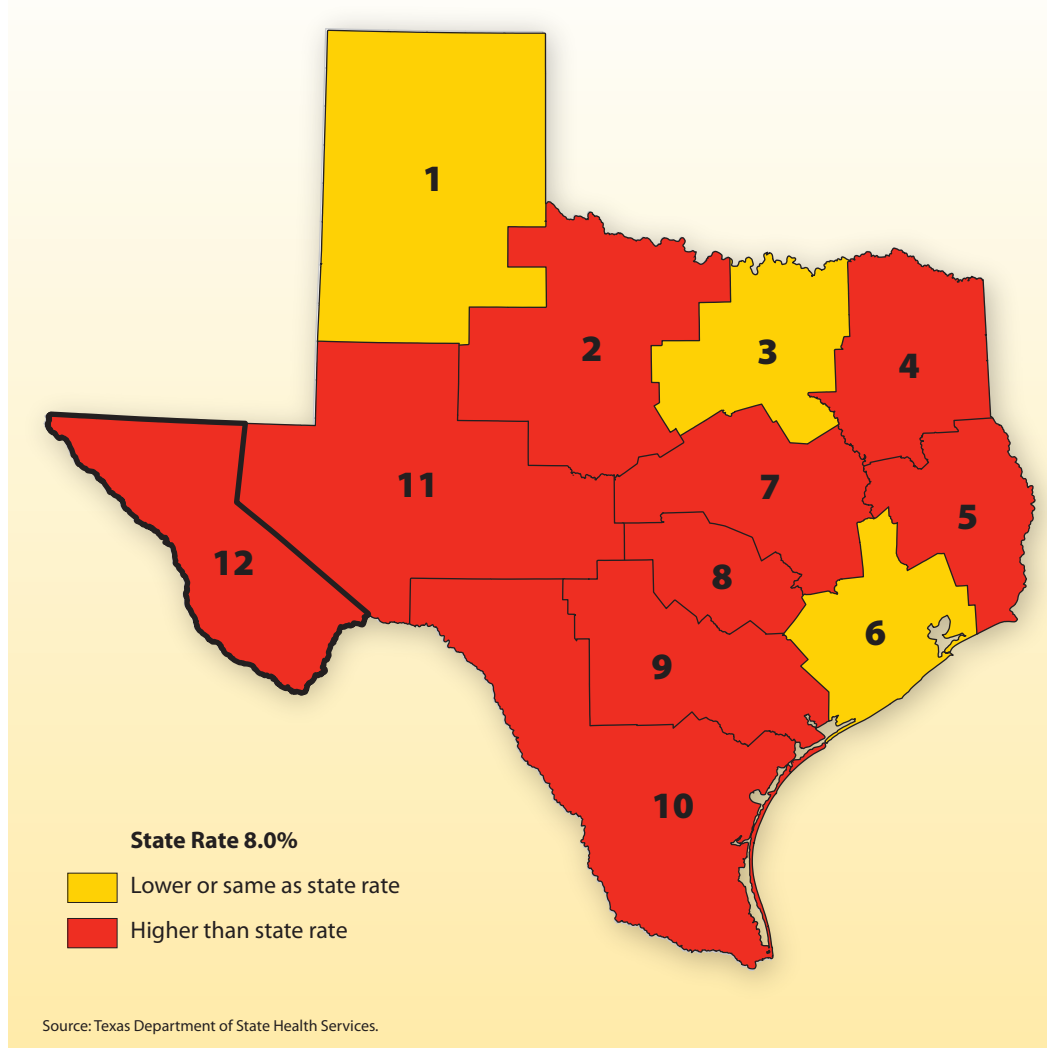
Texas hospital data reveal that two of the region's six counties have a higher-than-average number of admissions per 100,000 residents for long-term diabetes complications. In 2005, the state average for such admissions was 122 per 100,000 residents; in El Paso and Hudspeth counties, the rates were 166 and 238, respectively.⁸⁰

Local organizations in the region are joining the fight against obesity and diabetes. The El Paso Diabetes Association, in collaboration with Texas Tech-Pediatrics, Thomason Hospital Diabetes Management Program and Sierra Providence Diabetes Center sponsor two children's summer camps — Camp Lydia Mann and In Control Teen Camp — to educate children about diabetes.⁸¹ At the camps, children learn more diabetes, share common experiences and hear what they can do to avoid long-term diabetes complications.



Exhibit 33

Adult Diabetes Prevalence in the Upper Rio Grande Region Compared to the Rest of the State, 2006



Many local area hospitals and community health centers also provide educational and treatment programs to individuals with diabetes.

Las Palmas and Del Sol Healthcare System is home to the region's first Diabetes Center of Excellence. The hospital's diabetes treatment program takes a multidisciplinary-team approach and addresses the physical, psychological and social needs of the diabetic

patient. The hospital provides a wide range of services that include meal planning, exercise regimes, blood-glucose monitoring, proper foot care and the prevention and detection of long-term complications.⁸²

In 2005, the Diabetes Center at El Paso's Sierra Providence Memorial Hospital was awarded the American Diabetes Association's (ADA's) Education Recognition Certificate for meeting stringent national standards for diabetes



The Texas Legislature created the Diabetes Research Center at Texas Tech University in El Paso in 2001.

self-management education programs. Diabetes self-management education teaches people to better manage their diabetes and avoid disease-related complications. In 2008, the ADA re-accredited Thomason Hospital's diabetes education program for three more years.⁸³

Community health centers, including Centro de Salud Familiar La Fe, Centro San Vicente Clinic and Project Vida Health Center, also provide diabetes education and lifestyle promotion programs that emphasize prevention. In 2007, following a competitive review, the Diabetes Program at the Texas Department of State Health Services selected the Project Vida Health Center in El Paso as a Community Diabetes Project (CDP) to provide community-based diabetes prevention and management. These CDP projects, according to the Texas Diabetes Council, "implement evidence-based programs and strategies at the community level, and create

or advocate for community policy, and systems and environmental changes conducive to primary and secondary diabetes prevention."⁸⁴

In recognition of the need for diabetes prevention and control in Border communities, the Texas Legislature created the Diabetes Research Center at Texas Tech University in El Paso in 2001. The center conducts epidemiological studies of diabetes and its complications; provides curriculum development assistance for medical education programs; and supports health education by disseminating information through its Web site.

Plans are under way to incorporate the Diabetes Research Center into the Diabetes and Obesity Research Center of Excellence at Texas Tech University Health Sciences Center in El Paso. The Center of Excellence will continue the research work of the Diabetes Research Center and provide the public with the latest information on diabetes and management of the disease.⁸⁵

Local health care initiatives as well as the efforts of higher education institutions have increased the availability of health care in the Upper Rio Grande region and should continue expanding services there.

Texas Fitness

In 2007, Texas Comptroller Susan Combs announced the Texas Fitness Now grant program, aimed at middle school students attending schools whose enrollment is at least 75 percent economically disadvantaged. Texas Fitness Now helps teach children the importance of physical activity and fitness.

To be eligible for a Texas Fitness Now grant, a school must ensure that students in grades 6, 7 and 8 participate in physical activity either for 30 minutes a day or 225 minutes per two-week period for the entire school year, and meet several other physical fitness or administrative requirements. The grants may be used to buy equipment, develop physical education curricula and instructional materials or to train teachers to help their students become fit. At least 25 percent of the funds are directed for nutritional education.⁸⁶

Schools in the El Paso Independent School District and the Marathon Independent School Districts are among schools that received this funding in 2008-09.⁸⁷

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Education

Education is the cornerstone of economic growth. Texas' ability to remain competitive in a global economy will depend on growing a talented and educated work force.

Public Education

Roughly 3.8 percent of the state's public elementary and secondary students attend school in the Upper Rio Grande region, which contains 21 public school districts with 251 campuses as well as six charter districts with nine campuses. Upper Rio Grande schools provide early childhood through Grade 12 education for about 177,000 students.

Enrollment in the region rose by 7.1 percent between the 2001-02 and 2007-08 school years,

for a net gain of more than 11,700 students. School enrollment in the region, state and nation rose by 7.1 percent, 11.8 percent and 6.0 percent, respectively, over the same period.¹

In the 2007-08 school year, the region's largest independent school districts (ISDs) by enrollment were El Paso ISD in El Paso County, with almost 62,000 students; Ysleta ISD in El Paso County, with nearly 45,000 students; and Socorro ISD in El Paso County, with about 39,000 students. The smallest districts were San Vicente in Brewster County, with 26 students, and Valentine in Jeff Davis County, with 48 students.

The region's high concentration of Hispanics—accounting for 88.6 percent of enrollment in the 2007-08 school year—means that it is substantially less ethnically diverse than the state as a whole (**Exhibit 34**).



Spring 2008 Commencement at University of Texas at El Paso

PHOTO: University of Texas at El Paso, University Communications



Early College High Schools

Early College High Schools (ECHS) have been developed throughout the country with both private grants, from the Bill and Melinda Gates Foundation and others, and public funding from the federal and state governments.

Since 2002, more than 200 schools have been established as or converted into ECHSs. These schools work with nearby higher education institutions to develop their curricula and often offer dual-enrollment hours; students graduating from an ECHS also receive an associate degree, which allows them to enter a four-year college or university as a junior.²

The Upper Rio Grande region is home to two Early College High Schools. Canutillo Independent School District (ISD) in El Paso County recently opened the Northwest Early College High School for the 2008-09 school year. This school is a partnership between El Paso Community College and Canutillo ISD, providing dual-credit courses for its students. Up to 80 percent of its students accepted each year are from Canutillo ISD, with the remainder coming from surrounding districts.

Once accepted, all students must attend a summer work seminar to become acquainted with the Northwest ECHS. The school has no athletic programs, as its main focus is academics. It does, however, offer students many clubs and organizations as well as fine arts groups. The school also encourages participation in intramural and community leagues.³

Socorro Independent School District's Mission Early College High School boasts small class sizes, with only 100 students admitted per year. Incoming high school students who reside in Socorro ISD and meet admission requirements are eligible to attend on a first-come, first-served basis. Socorro ISD partners with El Paso Community College to provide dual-credit courses for students who are primarily low-income, bilingual and first-generation college-bound. The school does not have a sports program but offers classes in all subjects of music, art and dance.⁴

The region has seen an increase in its number of economically disadvantaged students. Generally, economically disadvantaged students are defined as those students who are eligible for free or reduced price meals through the National School Lunch Program or other public assistance programs. In

2001-02, nearly 122,000 or 73.7 percent of those enrolled were identified as economically disadvantaged. In 2007-08, almost 133,000 or 75.2 percent of the region's students were classified in this way. The statewide average is 55.3 percent of total enrollment.

Accountability

Exhibit 35 compares the accountability ratings for the region's school districts to state averages for 2007-08. The Upper Rio Grande region exceeded the state average for Exemplary ratings by almost 4 percent.

As of August 2008, of the region's 27 districts two were rated Exemplary; two were rated Recognized; 19 were rated Academically Acceptable; three were rated Academically Unacceptable; and one was listed as "Not Rated: Other."

Exhibit 34

Ethnicity of Public School Students, Upper Rio Grande Region, 2001-02 vs. 2007-08 School Years

Ethnicity	2001-02	2007-08
White	10.0%	7.6%
Hispanic	86.2	88.6
Black	2.7	2.8
Asian/Pacific Islander	0.7	0.7
Native American	0.3	0.3

Note: Numbers may not total due to rounding.
Source: Texas Education Agency.



The region also exceeded statewide averages in its number of campuses rated as Academically Acceptable (**Exhibit 36**).

Of the 267 campuses in the region, including charter schools, 17 were rated Exemplary; 89 were Recognized; 139 were Academically Acceptable; five were Academically Unacceptable; and 17 were listed as “Not Rated: Other” for 2007-08.

Of the region’s six charter districts, two were rated as Exemplary; two were Academically Acceptable; one was Academically Unacceptable; and one was listed as “Not Rated: Other.”

Of the region’s 10 charter campuses, three were rated as Exemplary; four were Academically Acceptable; two were Academically Unacceptable; and one was listed as “Not Rated: Other.”

Among the region’s districts that teach all grade levels, Alpine ISD in Brewster County had the highest percentage of students passing all Texas Assessment of Knowledge and Skills (TAKS) tests in 2007-08, at 75 percent. (An average for the Upper Rio Grande region is not available because TEA reports district data only as percentages.)

In Marfa ISD, 92.9 percent of graduating students took college entrance exams in the 2006-07 school year, significantly outpacing the statewide average of 68.2 percent. Of the 18 Upper Rio Grande districts for which data are available, 10 had shares above the state average and eight had lower shares.

El Paso ISD had the region’s highest percentage of students taking the tests that scored at or above the criterion score TEA uses to measure college readiness, at 18.3 percent; the district also had more than 70

percent of its students take at least one of the tests. Across the state, 27.1 percent of students who took at least one of the tests scored at or above the criterion score.

Outcomes

According to the 2000 Census, almost 66 percent of Upper Rio Grande residents above the age of 25 had a high school diploma, a GED or some higher education. The statewide average is 75.7 percent.⁶

In the 2006-07 school year, 9,383 students graduated from the region’s high schools,

Exhibit 35

2007-08 Accountability Ratings, Upper Rio Grande School Districts

Rating	Region	Statewide
Exemplary	7.4%	3.5%
Recognized	7.4	26.8
Academically Acceptable	70.4	66.6
Academically Unacceptable	11.1	2.6
Not Rated: Other	3.7	0.6

Note: “Not Rated: Other” includes campuses such as alternative education programs or early childhood education centers. These data include charter districts. Numbers may not total due to rounding.
Source: Texas Education Agency.

Exhibit 36

2007-08 Accountability Ratings, Upper Rio Grande School Campuses

Rating	Region	Statewide
Exemplary	6.4%	12.2%
Recognized	33.3	34.4
Academically Acceptable	52.1	42.8
Academically Unacceptable	1.9	2.5
Not Rated: Other	6.4	8.1

Note: “Not Rated: Other” includes campuses such as alternative education programs or early childhood education centers. These data include charter districts. Numbers may not total due to rounding.
Source: Texas Education Agency.



Museums, Performing Arts and Cultural Organizations

The Upper Rio Grande region is home to a number of museums, historic theatres and other cultural organizations.

Museums, Theatres and Cultural Organizations in the Upper Rio Grande Region

County	City	Museums and Performing Arts Organizations
Brewster	Alpine	Museum of the Big Bend; Center for Big Bend Studies; Archives of the Big Bend
Brewster	Northeast of Big Bend	Hallie Stillwell Hall of Fame and Museum
El Paso	El Paso	El Paso Centennial Museum; Wilderness Park Museum; Ysleta Del Sur Pueblo Cultural Center; El Paso Museum of Art; El Paso Museum of History; National Border Patrol Museum; Plaza Theatre; Hueco Tanks State Historical Site; El Paso Museum of Archeology; Chamizal Museum
Jeff Davis	Fort Davis	Chihuahuan Desert Research Institute and Visitor Center; Fort Davis National Historical Site; Overland Trail Museum; McDonald Observatory
Brewster	Marathon	Marathon Museum
Presidio	Marfa	Marfa and Presidio County Museum; The Chinati Foundation; Marfa Theatre; Fort Leaton State Historical Site
Hudspeth	Sierra Blanca	Railroad Depot Hudspeth County Museum
Culberson	Van Horn	Culberson County Historical Museum

Sources: Texas Almanac, 2008-2009 and the Texas Comptroller of Public Accounts.

The region's rich history and culture is reflected in El Paso's Plaza Theatre. The theater opened with seating for more than 2,400 in 1930. For most of the next 20 years, it served as a major stage and film performance center, with state-of-the-art technology for its day.

The Plaza became known for its "night sky," which would appear on the ceiling when the lights dimmed for the beginning of shows. Once the lights went down, tiny lights would twinkle above patrons while a cloud machine would create floating clouds. Beginning each show and accompanying some was the theater's Mighty Wurlitzer Organ, which would rise from the orchestra pit playing music or using an advanced noise box to create the sounds of birds, horses' hooves and the ocean.

In 1972, the organ was sold at auction, along with much of the original artwork associated with the theater. In 1986, the Plaza Theatre was set for demolition. The El Paso Community Foundation organized fundraisers to save and refurbish the historic venue. In 1998, the city reacquired the Mighty Wurlitzer Organ. In 2002, the city announced a partnership with public and private entities to restore the Plaza Theatre to its original splendor. Currently, the theatre hosts local and travelling shows.⁵

representing about 3.9 percent of the state-wide total that year. El Paso ISD had the largest number of graduates (3,251) while Valentine ISD had the smallest number, with just four graduates.

About 3.5 percent of the region's students graduated under the state's most stringent graduation plan, the Distinguished

Achievement plan; 87.3 percent under the Recommended plan, which is the required plan; and 9.2 percent under the Minimum plan, a less-stringent graduation plan that requires both parental and school approval, or under an individual education plan offered through Special Education. The share of Upper Rio Grande students who graduated



under the Distinguished Achievement and Recommended plans, at 90.8 percent, far exceeded the statewide average of 77.9 percent (**Exhibit 37**).

School Finance

In the 2006-07 school year, the Upper Rio Grande region's total school spending per pupil, including debt service, averaged \$9,864. This was about 2.9 percent lower than the statewide average of \$10,162 for that year. Ten districts in the region were 20 percent or more above the statewide spending average; 11 districts, including charters, were below the statewide average.

Excluding charter districts, which do not receive funding from local tax revenue, the region's lowest total tax rate in 2007 was in Valentine ISD, at 91.3 cents per \$100 of property value. Canutillo ISD levied the highest rate, at \$1.395. The statewide average was \$1.187; 13 districts in the Upper Rio Grande region had lower rates.

The region generated a much lower percentage of its school revenue from local taxes (23.8 percent) than the statewide average of 45.8 percent. Marathon ISD received the largest portion of its school funding from local taxes (50.2 percent), while San Elizario ISD had the lowest share (4.7 percent). The region's percentage of revenue from other local sources, such as transfers and tuition payments, was a bit lower than the state average, at 4.5 percent versus 6.7 percent. San Vicente ISD gained 32.8 percent of its revenue from other local sources, the highest such share in the region; Valentine ISD received the lowest percentage for non-charter schools, at 1 percent.

San Elizario ISD had the lowest property wealth per pupil in 2007, at \$33,885, while Marathon ISD led the region with \$936,842 per pupil. The regional average was \$161,531, or 51.6 percent lower than the statewide average of \$333,420.

Texas law requires districts with relatively high property wealth per pupil to share it with less wealthy districts through a process called "equity transfers." In 2006-07, no districts in the Upper Rio Grande region submitted an equity transfer to other districts. In that year, the statewide average for equity transfers was \$312 per pupil.

San Elizario ISD received more than 74 percent of its revenue from the state in 2007, the highest share among the region's districts that also received some part of their revenue from local taxes. Culberson County-Allamore ISD received the smallest state share, at 15.8 percent. The regional average for 2007 was 57.7 percent, significantly higher than the statewide average of 37.8 percent. The region also received a larger share of federal funds than the statewide average, at 14 percent versus 9.8 percent.⁷

Exhibit 37

2007 High School Graduates, Upper Rio Grande Region vs. Statewide

Graduation Plan	Region	Statewide
Distinguished Achievement	3.5%	10.8%
Recommended	87.3	67.0
Minimum/IEP*	9.2	22.1
Distinguished Achievement & Recommended as Percent of Total	90.8%	77.9%

Source: Texas Education Agency.



Teachers

In the 2007-08 school year, the average Upper Rio Grande teacher salary was \$46,803, 1.4 percent above the statewide average of \$46,178. Ysleta ISD had the highest average salary at \$48,818. (It should be noted, however, that a district's average salary can vary due to the length of teacher tenure as well as wage levels. In other words, District A may have a higher average salary than District B because it has a higher percentage of experienced teachers, even though its wage levels for various years of experience may be lower than District B's.)

Average teacher salaries in the region rose by 19.4 percent from 2002-03 to 2007-08, compared to a statewide average rise of 15.5

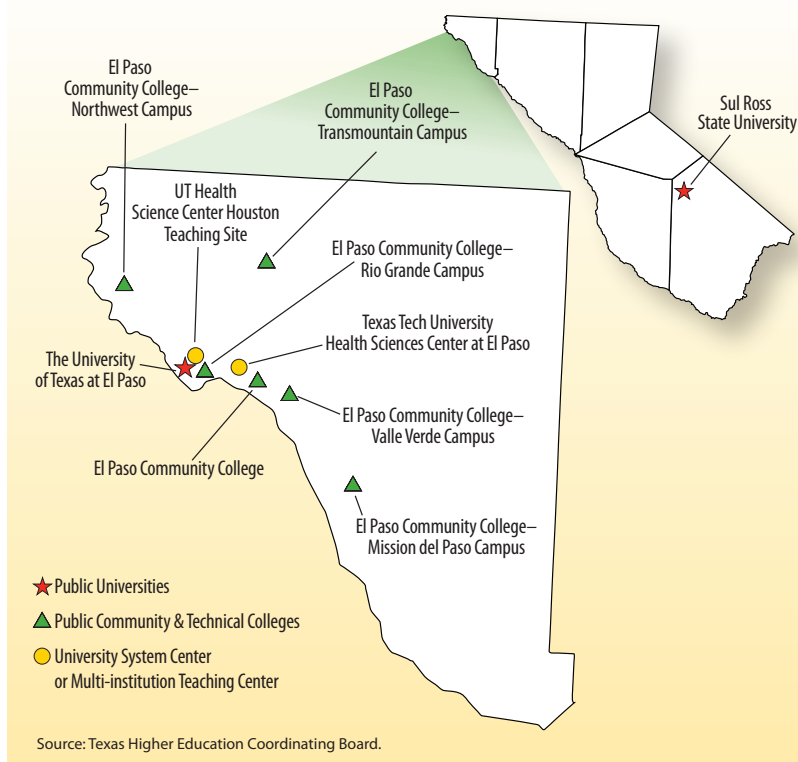
percent. Burnham Wood Charter School District had the highest percentage increase over this period, at more than 58 percent. The region's teacher salaries accounted for 28 percent of total district expenditures from all funds in the 2006-07 school year, slightly below the statewide average of 30.1 percent. El Paso Academy had the highest percentage of teacher salaries to total expenditures, at 39.3 percent. In all, seven of the region's districts devoted a higher percentage of expenditures to teacher salaries than the statewide average, while 18 had lower percentages.

In 2006-07, the region's average number of students per teacher matched the statewide average, at 14.7. San Vicente ISD had the lowest number of students per teacher, at 4.2.⁸

Average teacher salaries in the region rose by 19.4 percent from 2002-03 to 2007-08.

Exhibit 38

Higher Education Campuses, Upper Rio Grande Region



Higher Education

The Upper Rio Grande region has five institutions of higher education, all but one of which are located in or near the city of El Paso. The University of Texas at El Paso and El Paso Community College operate in the city, as do two health-related educational centers affiliated with Texas Tech University and the University of Texas Health Science Center at Houston. Sul Ross State University is in Alpine. El Paso Community College has five campuses in the region (**Exhibit 38**).⁹

Enrollment

In fall 2008, 45,776 students were enrolled in Upper Rio Grande colleges and undergraduate universities. Universities accounted for 48.7 percent of the total, while the remaining 51.3 percent were enrolled at El Paso Community College.



Exhibit 39

Upper Rio Grande Region, Fall Headcount Enrollment 2000 and 2008

Public Institutions	Fall 2000 Enrollment	Fall 2008 Enrollment	Enrollment Change	Percent Change
University of Texas at El Paso	15,224	20,458	5,234	34.4%
Sul Ross State University	2,010	1,841	-169	-8.4%
Regional Total – Public Universities	17,234	22,299	5,065	29.4%
Statewide Total – Public Universities	414,626	509,136	94,510	22.8%
El Paso Community College	17,747	23,477	5,730	32.3%
Regional Total – Two-year Public Colleges	17,747	23,477	5,730	32.3%
Statewide Total – Two-year Public Colleges	431,934	597,146	165,212	38.2%
Regional Total Higher Education	34,981	45,776	10,795	30.9%

Note: Regional data do not include enrollment for branch campuses of health-related institutions in Upper Rio Grande since enrollment is not reported separately to the Texas Higher Education Coordinating Board.

Source: Texas Higher Education Coordinating Board.

The University of Texas at El Paso (UTEP) had 20,458 students enrolled in fall 2008, with Sul Ross adding 1,841 to the four-year institution total. UTEP's enrollment has risen by 34.4 percent since fall 2000, while Sul Ross enrollment fell by 8.4 percent over the same period. Statewide four-year enrollment rose by 22.8 percent in those years. Two-year higher education enrollment in the region rose from 17,747 in 2000 to 23,477 in 2008, a 32.3 percent increase. That pace was somewhat slower than the statewide two-year enrollment growth rate of 38.2 percent (**Exhibit 39**).¹⁰

Accessibility

The region's universities accepted an average of 98.0 percent of first-time undergraduate applicants for the fall 2008 semester, well above the statewide average of 74.4 percent. The University of Texas at El Paso accepted 98.6 percent, while Sul Ross State University accepted 97.3 percent of its applicants.

About 14.6 percent of the 5,467 applicants accepted at UTEP and 6.1 percent of the

727 successful applicants at Sul Ross were accepted because they were in the top 10 percent of their high school graduating class, compared to 21.8 percent of accepted applicants statewide.¹¹

Outcomes

Because some degrees require more than four years of study, and because some students may need more time to graduate, the Texas Higher Education Coordinating Board (THECB) compares four-year and six-year graduation rates to measure university outcomes. Graduation rates improved significantly between fiscal 1999 and fiscal 2007 at the University of Texas at El Paso, with the four-year rate doubling and the six-year rate increasing by 21 percent over that time period. Sul Ross also saw an increase in four-year graduation rates but a slight decrease in the six-year rate (**Exhibit 40**).

Because many community college students go on to a university to obtain a four-year degree, THECB also compares three-year and six-year graduation rates to measure



University of Texas at El Paso

The University of Texas at El Paso (UTEP), the westernmost branch of the University of Texas System, was founded in 1914 as the state's first school of mines. The school still has a mine tunnel on campus, located behind its Computer Sciences building.¹²

At its inception, UTEP was called the Texas State School of Mines and Metallurgy and had 27 students. UTEP now has more than 20,000 students from dozens of countries, and more than 70 percent of its student population is Hispanic.

UTEP features a wide variety of programs and services and more than 170 registered campus organizations. Students can choose from more than 80 bachelor's degree programs, more than 70 master's programs and 14 doctorate programs in the areas of Business Administration, Education, Engineering, Health Sciences, Liberal Arts, Science and Nursing.¹³

The university is one of El Paso's largest employers, with about 4,500 workers.¹⁴ It pays more than \$125 million in annual salaries and contributes roughly \$343 million to local residents' personal income and \$375 million in area business activity. It also ranks among Texas' top schools in terms of research spending, with nearly \$46 million in fiscal 2006 alone.¹⁵ The school is hugely popular with Hispanics seeking undergraduate degrees in engineering.

In 2006 and 2007, *Hispanic Business* magazine selected UTEP's College of Engineering as the nation's top engineering school for Hispanics.¹⁶ The college consistently ranks as one of the nation's top five schools in bachelor's degrees awarded to Hispanics, and has been named a "Model Institution for Excellence" by the National Science Foundation.

In 2008, *Hispanic Business* magazine also ranked UTEP's Master of Business Administration (MBA) program sixth among the nation's Top 10 business graduate programs for Hispanics.¹⁷

community college outcomes. El Paso Community College's three-year and six-year graduation rate from fiscal 2000 to fiscal 2007 improved dramatically; the three-year rate doubled and the six-year rate increased by 84

percent. These graduation rates, however, still lag behind the statewide averages (**Exhibit 41**).

From fiscal 2000 to fiscal 2008, the increase in the number of degrees awarded by UTEP far exceeded the statewide increase of

Exhibit 40

Four- and Six-Year Graduation Rates, (First-Time, Full-Time, Degree-Seeking Students), Upper Rio Grande Public Universities vs. Statewide Average Fiscal 1999 and 2007

Institution	Fiscal 1999 4-year	Fiscal 1999 6-year	Fiscal 2007 4-year	Fiscal 2007 6-year
University of Texas at El Paso	2.6%	26.4%	5.3%	31.9%
Sul Ross State University	8.9	25.2	9.7	24.6
Statewide Average	18.0%	49.2%	25.3%	56.3%

Source: Texas Higher Education Coordinating Board.



35 percent, while Sul Ross' number of degrees remained essentially static (**Exhibit 42**).

Over the same period, El Paso Community College significantly increased its awards of degrees and certificates, at a higher rate than the statewide increase (**Exhibit 43**).¹⁸

Affordability

From 2002-03 to 2008-09, estimated resident tuition and fees at both public universities in Upper Rio Grande were below the

statewide average. The region's tuition and fees rose sharply over this period, however, as they did throughout the state (**Exhibit 44**).

From 2002-03 to 2008-09, resident tuition and fees at community colleges statewide rose by an average of \$675 or about 60.3 percent; El Paso Community College's increase was significantly smaller, at 13.1 percent.²¹

The total cost of attending the university or community college in El Paso, including

(text continued on Page 91)

From fiscal 2000 to fiscal 2008, El Paso Community College significantly increased its awards of degrees and certificates.

Exhibit 41

Three- and Six-Year Graduation Rates (First-time, Full-time, Credential-Seeking Students) Upper Rio Grande Community Colleges

Institution	Fiscal 2000 3-year	Fiscal 2000 6-year	Fiscal 2007 3-year	Fiscal 2007 6-year
El Paso Community College	3.2%	11.3%	6.5%	20.8%
Statewide Average	10.8%	25.7%	11.1%	30.8%

Source: Texas Higher Education Coordinating Board.

Exhibit 42

Degrees Awarded, Public Universities, Upper Rio Grande Region vs. State, Fiscal 2000 and 2008

Institution	Fiscal 2000	Fiscal 2008	Change	% Change
University of Texas at El Paso	2,131	3,529	1,398	65.6%
Sul Ross State University	378	375	-3	-0.8
Statewide Total	78,954	106,582	27,628	35.0%

Source: Texas Higher Education Coordinating Board.

Exhibit 43

Degrees and Certificates Awarded, Upper Rio Grande Region Two-Year Colleges, Fiscal 2000 vs. 2008

Institution	Fiscal 2000	Fiscal 2008	Change	% Change
El Paso Community College	1,188	2,174	986	83.0%
Statewide	37,395	55,809	18,414	49.2%

Source: Texas Higher Education Coordinating Board.



Exhibit 44

Upper Rio Grande Region College Costs**Public Universities**

Institution	Resident Tuition and Fees 2002-03	Resident Tuition and Fees 2008-09	Dollar Change 2002-03 to 2008-09	Percent Change 2002-03 to 2008-09	Resident Total Costs 2002-03	Resident Total Costs 2008-09	Percent Change 2002-03 to 2008-09
University of Texas at El Paso	\$3,195	\$5,926	\$2,731	85.5%	\$14,077	\$20,348	44.5%
Sul Ross State University	2,962	5,058	2,096	70.8	9,721	15,981	64.4
Statewide Average	\$3,441	\$6,193	\$2,752	80.0%	\$13,047	\$18,389	40.9%

Public Community Colleges

Institution	Resident Tuition and Fees 2002-03	Resident Tuition and Fees 2008-09	Dollar Change 2002-03 to 2008-09	Percent Change 2002-03 to 2008-09	Resident Total Costs 2002-03	Resident Total Costs 2008-09	Percent Change 2002-03 to 2008-09
El Paso Community College	\$1,503	\$1,700	\$197	13.1%	\$11,413	\$13,442	17.8%
Statewide Average	\$1,120	\$1,795	\$675	60.3%	\$9,248	\$12,510	35.3%

Note: Resident total costs include tuition and fees, books and supplies, room and board, transportation and personal expenses.
Source: Texas Higher Education Coordinating Board.

Sul Ross State University

Alpine's Sul Ross University was chartered in 1917 as a state college with an emphasis on teacher training. Operations officially began in June 1920, under the direction of school President Thomas J. Fletcher. By 1933, the university's graduate school was awarding master's degrees.

Sul Ross University was accepted into the Southern Association of Colleges and Secondary Schools and grew steadily from 1923 to 1945. With the onset of World War II, the school added a Navy pilot training program and a Woman's Army Corp Training School.

Sul Ross University has continued to grow through the years, adding programs in Fine Arts, Language Arts, Science, Social Science, Teacher Education and Vocations. The Legislature officially changed its name to Sul Ross State University in 1969.

Sul Ross University is now part of the Texas State University System. In Fall 2008, 1,834 students attended the school, with a student-teacher ratio of about 16:1. It has 48 undergraduate degree programs and 27 graduate programs. In the 2007-08 school year, the university awarded 570 total undergraduate and graduate degrees.¹⁹

Sul Ross is home to the Museum of the Big Bend, which highlights the region's culture and history. Visitors can learn about the area through interactive exhibits that are periodically updated to ensure their relevance. The collection contains artifacts and art pertaining to the region's four distinct cultures, Native Americans, the Spanish, Mexicans and Anglo-Americans. The school also hosts the Archives of the Big Bend, which include art and artifacts, manuscripts, photographs, newspapers, books and maps from the region.²⁰



tuition and fees, books and supplies, room and board, transportation and personal expenses, was and is higher than the state-wide average, while the total cost at Sul Ross remains lower than average.²²

Funding

Texas public universities' total revenue, including tuition and fees, general revenue appropriations, federal funds and institutional funds, rose by 15.6 percent from fiscal 2006

to fiscal 2008. In the Upper Rio Grande region, UTEP's increase was four-fifths of that, at 12.5 percent. Sul Ross' revenues grew more slowly, rising by 1.6 percent during the time period (**Exhibit 45**).²³

Total state appropriations for community colleges declined in the 2004-2005 two-year budget period, as they did for El Paso Community College. By the 2008-09 biennium, however, appropriations had recovered. But the college had a smaller percentage gain in

Exhibit 45

Public Universities Total Revenue Sources, Upper Rio Grande Region and Statewide, Fiscal 2006 and Fiscal 2008

University of Texas at El Paso

Revenue Source	Fiscal 2006	Fiscal 2008	% Increase
Tuition and fees	\$58,201,300	\$71,018,233	22.0%
State appropriations	90,915,012	104,596,701	15.0
Federal funds	62,611,976	65,093,233	4.0
Institutional funds	28,456,364	29,440,734	3.5
Total Revenue	\$240,184,652	\$270,148,901	12.5%

Sul Ross State University

Revenue Source	Fiscal 2006	Fiscal 2008	% Increase
Tuition and fees	\$6,308,595	\$6,713,483	6.4%
State appropriations	25,229,520	25,813,869	2.3
Federal funds	8,317,431	7,927,088	-4.7
Institutional funds	4,170,579	4,290,844	2.9
Total Revenue	\$44,026,125	\$44,745,284	1.6%

Statewide

Revenue Source	Fiscal 2006	Fiscal 2008	% Increase
Tuition and fees	\$2,000,693,293	\$2,400,749,604	20.0%
State appropriations	2,599,091,546	2,949,486,914	13.5
Federal funds	1,161,122,338	1,260,930,090	8.6
Institutional funds	1,375,219,819	1,638,009,659	19.1
Total Revenue	\$7,136,126,996	\$8,249,176,267	15.6%

Source: Texas Higher Education Coordinating Board.



appropriations between 2002-03 and 2008-09 than did total state community college appropriations (**Exhibit 46**).²⁴

Contact hours — the time a professor actually spends in the classroom with students — for community, state and

technical colleges rose by 25.5 percent statewide from fall 2000 to fall 2008. In the Upper Rio Grande region, contact hours increased even more at El Paso Community College, with a 27.8 percent growth rate (**Exhibit 47**).²⁶

Exhibit 46

General Revenue Appropriations, Public Community and Technical Colleges, Upper Rio Grande Region and Statewide, Fiscal 2002-2009

Institution	2002-03 Biennium	2004-05 Biennium	2006-07 Biennium	2008-09 Biennium	% Change 2002-03 to 2008-09
El Paso Community College	\$64,523,858	\$58,158,531	\$63,284,766	\$66,712,421	3.4%
Public Community & Technical College Statewide Total	\$1,709,158,821	\$1,622,914,188	\$1,763,151,222	\$1,845,292,200	8.0%

Source: Texas Higher Education Coordinating Board.

McDonald Observatory

The University of Texas' McDonald Observatory, with facilities located on top of Mount Locke and Mount Fowlkes, is one of the world's leading astronomical research centers. The observatory is a partnership between the University of Texas, Penn State University, Stanford University and two German universities, Ludwig-Maximilians-Universität München and Georg-August-Universität Göttingen. The main campus of the University of Texas at Austin houses the facility's administrative offices. The observatory itself hosts astronomers, students, teachers and curious visitors year-round.

The McDonald Observatory's Hobby-Eberly Telescope, dedicated in 1997, searches for black holes, stars, planets and other heavenly bodies. The Harlan J. Smith Telescope, completed in 1968, was the third-largest of its kind when built. The observatory's oldest telescope, however, is the Otto Struve. When built between 1933 and 1939, this reflecting telescope contained the second-largest mirror in the world. McDonald Observatory also operates a 30-inch telescope and a laser system to assist in astrological education.

Researchers at the facility work on numerous projects. They hope to discover the root of "dark energy," a mysterious force thought to be driving the ongoing expansion of the universe. Scientists are also studying how galaxies form and interact with one another.

Visitors to McDonald Observatory can participate in a wide range of astronomy-related activities. The grounds house an exhibit hall and theater that are open daily, along with tours that last roughly 90 minutes with experienced guides.

The facility also hosts "Star Parties," which offer a unique way to learn more about the night sky. Star Parties allow visitors to view stars, constellations and planets through the observatories' telescopes. The McDonald Observatory also hosts school and civic groups as well as online visitors and provides a one-of-kind learning experience that is fun and informative.²⁵



Exhibit 47

**Community, State and Technical Colleges, Contact Hours
Fall 2000 vs. Fall 2008, Upper Rio Grande Region**

Institution	Fall 2000	Fall 2008	% Change 2000 to 2008
El Paso Community College	3,255,072	4,161,312	27.8%
Public Community & Technical College Statewide Total	73,370,630	92,048,303	25.5%

Note: Contact hours include only those with a full or part-time faculty instructing by lecture, lab or practicum. Classes taught at an inter-institutional location are excluded.

Source: Texas Higher Education Coordinating Board.

The growth in educational achievement will play a vital and positive role in the region's economic future. The positive upswing in enrollment in Upper Rio Grande colleges and universities will, however, place new demands on the region's higher educational infrastructure, requiring more instructors to keep pace with the demand for services.

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Conclusion

The outlook for the Upper Rio Grande region is promising. Its relatively young population, increasing educational opportunities and growing health care sector should ensure the region's economic growth continues. It will remain an important international trade corridor.

The region's employment growth should continue along with the state's through 2013, while its non-metro counties are expected to surpass statewide job growth over this period. The region's professional and business services sectors should expand their employment by 73 percent between 2003 and 2013, with overall job growth reaching 23 percent. The military and the manufacture of household vacuums and men's footwear will continue to be important industries in the region.

Interstate Highway 10 and the Foreign Trade Zone at El Paso International Airport will support the region's position in international trade. The Kay Bailey Hutchison Desalination Plant will provide an important source for potable water for the region. These infrastructure projects, along with the proposed La Entrada al Pacifico highway, should help the region sustain its growth.

As with many other areas in Texas, the region faces a shortage of trained health care professionals. But the scheduled opening of the Paul L. Foster School of Medicine and

the construction of the Children's Hospital at Thomason General Hospital should increase the area's supply of medical professionals. While the region has historically been underserved by medical personnel, five of El Paso's 14 largest employers are health-related organizations.

Although three-quarters of the region's public school students are economically disadvantaged, 88 percent of its campuses are rated as Academically Acceptable or better. The University of Texas at El Paso has doubled its graduation rate between 1999 and 2007, helping to prepare the region's work force of tomorrow.

The Comptroller's office is ready to help the Upper Rio Grande region meet its challenges with economic information and analyses. For assistance, please contact the Comptroller's Local Government Assistance and Economic Development Division at www.texasahead.org/lga, or toll-free at (800) 531-5441, ext. 3-4679.

We will continue to provide local and state leaders with detailed information in this continuing series of reports. We hope you look forward to future volumes in this series, which will highlight each of the state's 12 economic regions (**Exhibit 48**).

For previous reports in this series, please see the Comptroller's *Texas in Focus: A Statewide View of Opportunities* at www.window.state.tx.us/specialrpt/tif for a statewide perspective, as well as *Texas in Focus: High Plains* (www.window.state.tx.us/specialrpt/tif/highplains),



Texas in Focus: South Texas (www.window.state.tx.us/specialrpt/tif/southtexas), *Texas in Focus: Upper East Texas* (www.window.state.tx.us/specialrpt/tif/uppereast) and *Texas in Focus: Central Texas* (www.window.state.tx.us/specialrpt/tif/central).

Exhibit 48

Map of Economic Regions

